

DUN'S REVIEW

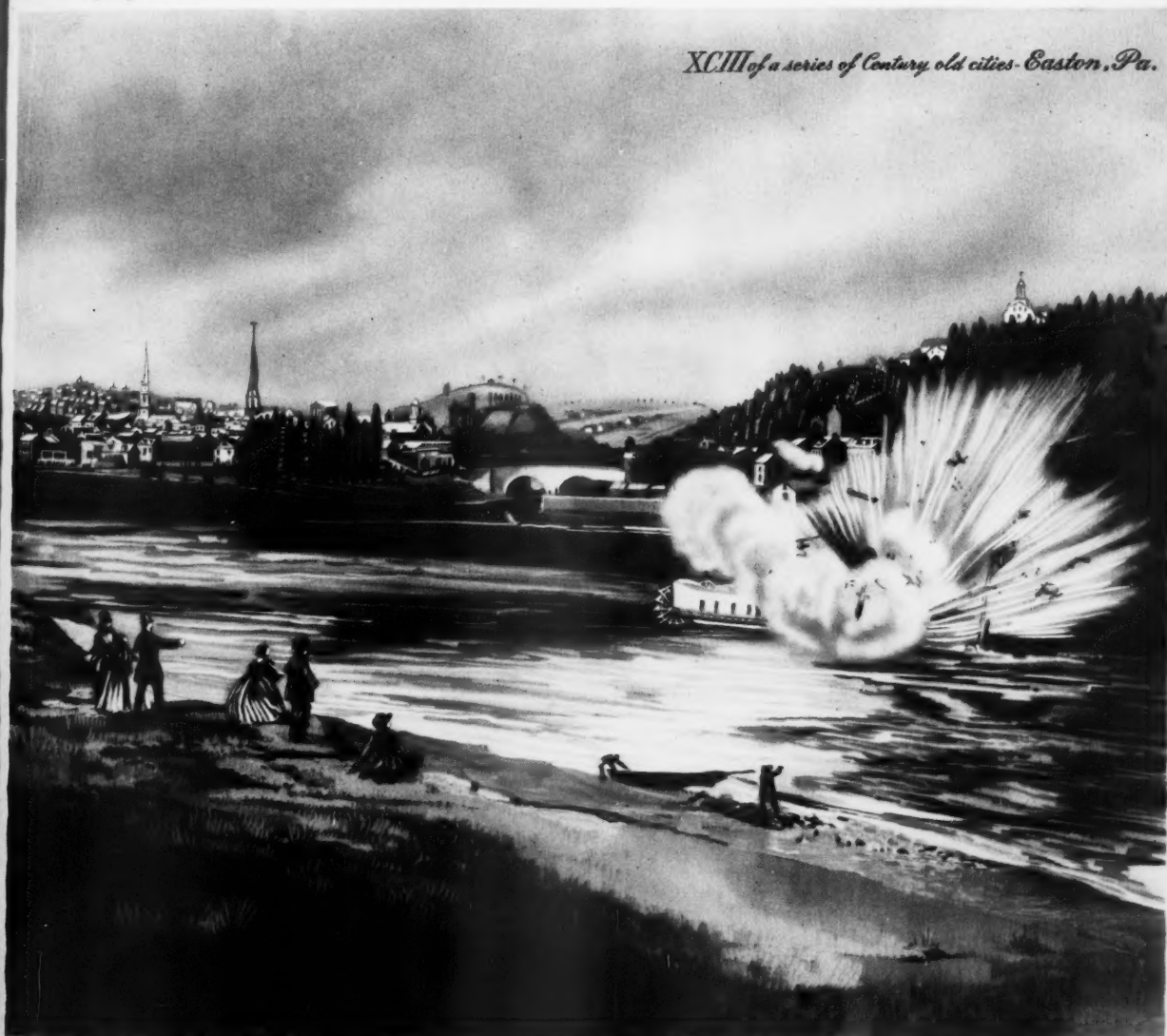
Published by
DUN & BRADSTREET, INC.

ESTABLISHED 1841

Thirty five cents

March 1945

XCIII of a series of Century old cities-Easton, Pa.



*Significance of Gross National Product Projections . . . A Guide to
Post-War Regional Development . . . Business Conditions Summarized*

THE FIRST HUNDRED YEARS *were the Easiest*



ONE HUNDRED YEARS AGO—when our business was established—a business insurance policy was a simple document, because business itself was simple. Today business is complicated—and a fire, marine or casualty policy may run to thousands of words, covering many pages. Its negotiation is an involved technical procedure. It calls for skilled technical advisers.

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At all times we represent the *insured*, acting as independent, unbiased *buyers* and *advisers*, free to deal with one insurance company or a dozen. The usefulness of this service is proved by the fact that, to meet our clients' needs, we have grown from a single office in New York one hundred years ago to a substantial international organization today.

What about the next 100 years? It is our belief

that business operations in a swiftly changing world will become more complicated, rather than simpler, and that the need for competent insurance brokerage will become greater than ever.

Under such conditions our service facilities—as in the past—will be altered and expanded to meet our clients' needs. But in one respect there will be no basic change—the fact that we have *no axe to grind, but yours*.

1845
1945
2045

NO AXE TO GRIND—BUT YOURS

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PHILADELPHIA	LOS ANGELES	VANCOUVER	MONTREAL

100 YEARS AS BUYERS OF INSURANCE FOR COMMERCE AND INDUSTRY

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DUN'S REVIEW, March 1945. Published monthly by DUN & BRADSTREET, INC., 290 Broadway, New York 8, N. Y. . . . Copyright 1945 DUN & BRADSTREET, INC. . . . Subscription information on page 66. . . . Frontispiece from Mr. R. I. Nowell.

The Cover

Established by the sons of William Penn, Easton, Pa., lies on rolling ground at the confluence of the Delaware River with the Lehigh River and Bushkill Creek.

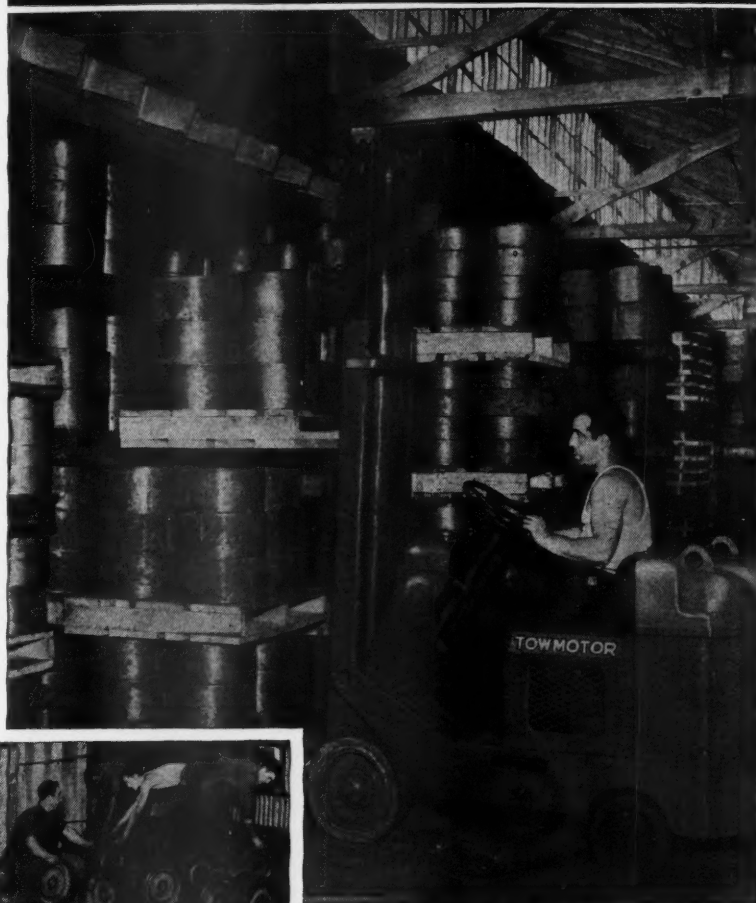
The first house was built at the foot of what is now Ferry Street in 1739 by David Martin who operated a ferry across the two rivers. Thomas and John Penn became interested in the site and on suggestion of Thomas the town was laid out in May, 1750, and named after his wife's family.

Easton, with a 1940 population of 33,589, lies in the center of a slate and cement industry. Its 67 manufacturing establishments in 1939 employed an average of 3,512 wage earners who produced goods valued at \$15,351,525. The 619 retail stores had sales of \$20,469,000; the 223 service establishments, receipts of \$990,000; and the 70 wholesalers, sales of \$8,999,000.

Industries include the manufacture of pneumatic machinery, paper drinking cups, clay colors, machinery, crayons, steel, pumps, compressors, aluminum and brass castings, chemicals, Diesel engines.

The cover print, from the Phelps Stokes Collection, New York Public Library, depicts the explosion of the "Steamer Alfred Thomas" at Easton, March 6, 1860.

HANDLING+Processing+HANDLING+Assembling+HANDLING+Packing+HANDLING+Storage+HANDLING
HANDLING—the Common Denominator of PRODUCTION



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Only three kinds of work are done on anything: processing, assembling, handling. No production, storage, transportation or delivery of goods can proceed without handling. You can't take it for granted if you're out to get production.

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STACKING CORRUGATED BOARD, NATIONAL GYPSUM COMPANY, NILES, OHIO—NESMITH PHOTOGRAPH FROM CUSHING

WHAT is the rôle of Gross National Product in post-war planning? In discussing this question Mr. George traces the rise of this statistical concept and compares it with the National Income Series as a guide in planning the current war economy. Marked differences of opinion have accompanied the growth of the various income concepts. One of the sharpest is centering on the use of gross national product in gaging the size of America's full employment goal in the post-war period. This will be discussed by Mr. George in a future issue.

GROSS NATIONAL PRODUCT PROJECTIONS

I. The Background and Relation to Current Issues

EDWIN B. GEORGE

*Economist, DUN & BRADSTREET, INC.
Associate Editor, DUN'S REVIEW*

FOR over a year plans for peace have stood restlessly to one side of the war, waiting for it to subside to a one-front basis. It was not the restlessness of impatience, as implied in the sharper military rebukes, but the restlessness of anxiety. Both civilian officials and business executives were terribly afraid of being caught flat-footed as their counterparts had been in November 1918. The sacrifices of civilian war

service were proper but no one wanted to carry through life the stigma of responsibility for heavy post-war unemployment if he could help it. There therefore *had* to be some advance planning, which to mean anything *had* to be tested in apologetic little actions, which in the military view were nevertheless held likely to precipitate a reconversion stampede.

In a recently concluded series in

DUN'S REVIEW, the author tried to picture the swirl of legitimate but competing interests among which WPB has to choose in putting together its reconversion policy. During all this time, on another sector of the planning front, one of the principal war-forged tools was being converted to the uses of peace. Yet it may have more significance for near-term economic thinking, than the brawnier and law-girded

WPB. At the moment it seems capable of working its way into the history books as a marker in our economic evolution. It has its own drama and can make its own entrance.

Slightly to the left but moving swiftly overhead, a statistical storm has for some time been raging over the level of national output that will be necessary to support full employment in post-war years. Its focal point has been the projection into the future of a measure of output known as Gross National Product, signifying the final market value of goods and services produced and sold to consumers, business, and Government in the course of a year. By the same token it suggests a potential base for the widely advertised post-war division of responsibility for full employment among consumers, business, and the Government. After the custom of the country it did not take Gross National Product long to become GNP.

GNP is only a statistic, but in its present form it was spawned in the flames of Pearl Harbor as surely as our present great physical spread of guns that thunder and planes that soar. Something like it was a prerequisite to the setting of all major physical production goals. For it became Washington's principal guide, on a scale and in detail never before attempted, (1) to the country's production of and capacity for both military and civilian goods, and (2) by the same token, to the size of the inflationary gap that might open up between civilian purchasing power and available goods.

Now GNP is being used for post-war planning. The purposes change

and the audience changes. Some of the purposes will be reviewed with considerable care after an examination of the nature and effectiveness of the new concept. A few generalizations, however, will make clear its importance to business.

For the most part the goals set up for the GNP post-war projection fall under the mutually supporting headings of expanded markets and full employment. For marketing men, prosperity sales budgets are supplied, enriching old data in both perspective and detail. Challenging figures are worked into old clichés about bigger and bigger production for higher and higher standards of living. Figures are given that purport to say, "If you are serious, this is what your words mean."

Post-War Markets Pre-Viewed

Over a year ago the Department of Commerce issued a pamphlet called "Markets after the War" by Morris Livingston, which put together under one cover a mass of data on the economic productivity of our people under conditions of full employment in a post-war year, with many hypothetical projections for individual commodity groups. The treatment was sober and orderly. There were no flourishes, no pretense of perfection in a difficult field of measurement, and no promises. As one of the first public exercises in national budgeting, however, it attracted wide attention. The Committee on Economic Development gave it the prestige of a possible blueprint of post-war business aims, and showered it over business America.

Individual communities and indus-

tries were assisted in estimating their own reasonable share of the new collective business responsibility, and in planning toward it. The market research departments of large and small corporations began to relate to it the prospects for their own commodities and services. Illustrative of the wide enthusiasm, Arno Johnson of the J. Walter Thompson Co. recently cited¹ the national success in approximately doubling the national income every twenty years from 1850 to 1929 as evidence of our ability to make the jump from a GNP of \$99 billion in 1929 to \$200 billion in 1950.

The United States Senate also reprinted the Department of Commerce Bulletin. Hans Christian Sonne, Chairman of the Executive Committee of the National Planning Association's Board of Trustees, published² a set of economic budgets showing a number of hypothetical distributions—over consumers, business, and Government—of responsibility for full employment. Former Vice-President Wallace likes to use the same concept figure as a fairly plain symbol of his own philosophy. Individuals and institutions challenged older estimates, offered new ones. Senator Murray offered a bill in Congress entitled "Full Employment Act of 1945." Editors praised and were worried.

In short, a weighty literature on the subject, suitable to its importance and daring, came into being. But in much of it the cadence had altered slightly. The emphasis of CED and many busi-

¹ Address before the Sales Executive Club of New York, February 6, 1945.

² Address before Agriculture, Business, Labor, and International Committees of the National Planning Association, June 8, 1944.



Smoke Stack

*Matter is indestructible
Answers the lofty stack
With a tongue of sudden flame
Giving the heavens back
The elements that came
Out of the sky's full measure
Of sun and wind and rain
Returning Earth's dark treasure
After the moment's gain.
Nothing has been destroyed*

In the work of peace or war,
Man never made a void
Nor gave Earth less or more.
Matter is indestructible,
Only the patterns vary;
Man changes not, but men
Are Tom and Dick and Harry
Who are recast again.
Let no man make denial
For sake of ride or pelf,
After an aeon's trial,
He can't destroy himself.

A. M. SULLIVAN

ness spokesmen was on helping business provide jobs, and on the means of doing so that lay within the normal functions of producing and selling. Others preferred to concentrate more bluntly on the possibility that business might fail to reach the goal, and

called for decisions that may very well be fateful regarding the extent and method by which any employment deficits should be taken up as Government's responsibility.

Thus is the perpetual issue of Government's proper function in a demo-

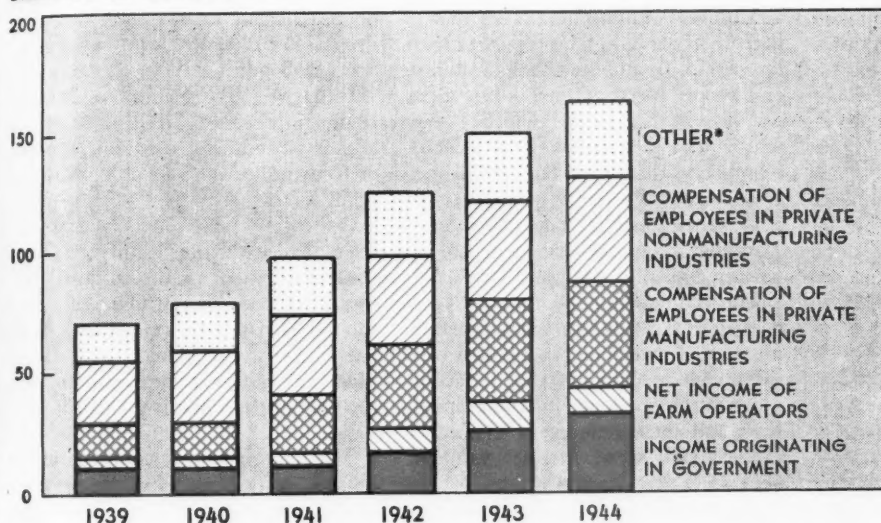
cratic economy given a brilliant new setting. It is in part the size of the goal that provides the illumination. In the name of full employment many of the current GNP projections require a rate of operation that seems at first blush to be more than double any

peace-time achievement. In all of them industry was to be given a free hand in approximating the miracle. In its first dismay, industry may have found a parallel in the old medieval custom of allowing a man to prove his innocence by staying under water without drowning. The test may not be actually so severe for reasons which will appear in subsequent discussion of the way in which the GNP concept is usually built up, but as far as practical realization of full employment is concerned the terms of some of the analysts are clearly unconditional. To the extent that industry falters, Government will be bound to give all possible administrative and legislative aid. To the extent that their joint efforts fail, the Government will be expected to spend its way to success. There are many variations of course, and the tag of finality is not to be hung on any one at the moment.

It is not surprising therefore that an obviously meritorious statistical effort should be drawn into political controversy. There are now at least a dozen published estimates of the size of GNP necessary to full employment. The range of them is not so wide as some of the more excited comments suggest, but it is substantial. In the main they run from the \$146 billion GNP equivalent of the Brookings Institution's National Income estimate for 1947³ to the possible \$220 billion suggested by Mosak for 1950⁴. (Allowance for popu-

COMPONENTS OF THE NATIONAL INCOME

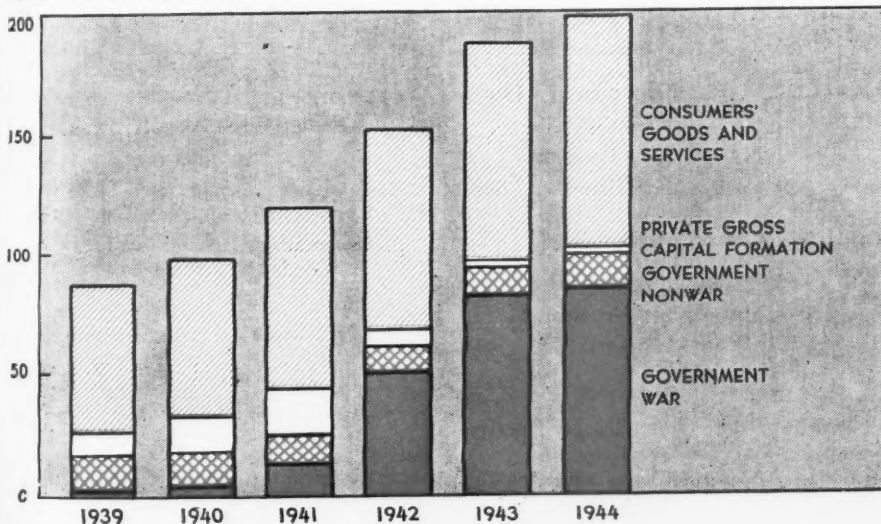
BILLIONS OF DOLLARS



* Includes corporate profits, net income of nonfarm proprietors, and private interest and net rents.

GROSS NATIONAL PRODUCT

BILLIONS OF DOLLARS



National income reached a total of 161 billion dollars in 1944, a gain of 11 billion over 1943 as compared with an average increase of 26 billion in the two preceding years. Government payrolls, which include the pay of the armed forces, was responsible for more than 5 billions of the 11 billion increase. Gross National Product in 1944 was almost 200 billion dollars, more than twice the total production of 1939, the last full year uninfluenced by rearmament and war. War purchases made up the largest part of the increase; consumer expenditures also increased substantially. These charts are from the Survey of Current Business published by the United States Department of Commerce.

³ "Post-War National Income—Its Probable Magnitude," by Joseph Mayer of Brookings Institution. Mr. Mayer strongly preferred National Income as a measure, and estimated it at about \$123 billion (including direct corporate taxes, \$127 billion).

⁴ Jacob L. Mosak, OPA, "Forecasting Post-War Demand," *Econometrica* of January 1945.

lation growth and final post-war adjustment between 1947 and 1950 would reduce even that spread moderately.) Most of the estimates originating within the Government lean toward the higher figure, with the concurrence of some of the private analysts. Several private estimates, published and unpublished, tend to settle in the medium and lower portions of the range.

Statistics of our past, present, and future gush from every academic retreat, and are for the most part taken in stride. It is not likely that so much excitement would have been engendered by this particular measurement if it did not happen to culminate in a prescription for the economic functions of Government as well. GNP has therefore performed a service running far beyond academic excellence in the arrangement of data on our economic life and problems. The issues raised belong to our times.

Full Employment Issue

Perhaps GNP's principal contribution has been to put a number of our more serious post-war problems in more orderly relationship to each other, which is in itself a useful innovation. There can and should be differences of opinion over what constitutes "full" employment and the relative significance of different kinds of unemployment, over the kind of governmental aid that industry most needs, over the most stimulating ways in which "Government money" can be spent, over the long pressed charge that the people of this country are over-saving and under-investing, and over the obligation of the Government to draw upon the common resources in correcting a common fault.

The beams of the new searchlight should be bright enough to reach the significance of public debt, both in the abstract and in relation to its specific purposes, and to bring into clearer perspective the inter-dependence of domestic and foreign policies. GNP can thus be seen as a fitted container for old issues that Liberals and Conservatives have heretofore had to fight mainly on an inconvenient piece basis. To date perhaps the implications have been more clearly seen by the economists and statisticians than by business men. Considering their statistical origins, this is natural. Those business statisticians who now disagree with the height of many of the GNP-full employment estimates doubtless feel that

they are trying to hold a hitherto quiet sector of the political front until their generals wake up to what is happening and send reserves.

There are therefore respectable stakes in this new numbers game—respectable both as to size and merit. They matter a great deal to the man who feels that no agency less powerful than Government can deal finally with the hazards of future unemployment, and that advance measurements will mean a minimum of bungling. They matter equally to the man who feels that with leadership, awareness of responsibility, and proper specifications, business can organize itself to carry the load. They matter in a different way to the man who knows that things have sometimes gone very badly in the past but is in a perpetual torment over how far a glandular economic organism can be managed by slide rules and levers.

The technical story begins some years back with the development and refinement of estimates of National Income—the sum of earnings paid or accruing for the services of labor, capital, land, and entrepreneurs; or in another authoritative view, the net value of goods and services produced.

We would not be Americans if we were not continually curious about how we were doing. We know of course in a broad sensual way when we are in the money or when we are broke. There is evidence, however, that internal shifts and strains sometimes occur in our economic body that we think

we understand but actually feel only at the nerve ends.

For decades the scholars of the world have been doing their part. The search for a measure that would reflect changes in both over-all national production and in its composition from year to year has gone on without abatement. Why should the answer be so difficult? Perhaps in no other country does industry disgorge so many facts about itself as are collected in America on production, sales, prices, and prospects. The difficulty is in taking them apart and putting them together in a way that will give the final result maximum significance. The difficulty of adding pounds, crates, gallons, number of teeth pulled, and value of washing done forces itself upon the attention.

One of the solutions that has succeeded in achieving dignity has been the development of the so-called National Income Series. Over the years this series has been shaped and hardened in concept, and thrust like a plumber's mole far back into our past, clearing out old statistical debris as it went.

The national income is expressed in dollars, as the common denominator of differentiated activities. The figure that was principally wanted over a long period was one that would represent the net return to the people for all the products they made and the services they performed in their economic activities. Net value did not exist in simple form for every eco-

I. NATIONAL INCOME AND EXPENDITURES—1944

In billions of dollars.

INCOME		EXPENDITURES	
Wages and Salaries, and Supplements	116	Consumer Expenditures	97.5
Proprietors' Income:		Private Gross Capital Outlays ..	1.8
Agricultural	11.8	Government Expenditures for	
Other	12.3	Goods and Services	99.4
Interest and Net Rents	10.6		
Profits after Taxes	9.9		
NATIONAL INCOME	160.6		
Depreciation Charges, Reserves, and so on	10.0		
Business Taxes and Non-Tax Liabilities	29.3		
Inventory Revaluation Adjustment	— .1		
Adjustment for Discrepancies ..	— 1.1		
GROSS NATIONAL PRODUCT	198.7		198.7

II. NATIONAL INCOME AND NATIONAL PRODUCT

In billions of dollars.

	1941	1942	1943	1944
GROSS NATIONAL PRODUCT OR EXPENDITURE.	120.5	151.5	187.8	198.7
Government Expenditures for Goods and Services	26.5	62.0	94.8	99.4
Federal Government	18.6	54.6	87.4	91.9
War	13.3	49.5	82.5	86.3
Non-War	5.3	5.0	4.9	5.6
State and Local Government	7.9	7.4	7.4	7.4
Output Available for Private Use	93.9	89.5	93.0	99.4
Private Gross Capital Formation	19.4	7.7	2.1	1.8
Construction	5.2	2.8	1.5	1.6
Residential	2.8	1.3	.6	.5
Other	2.5	1.5	.9	1.1
Producers' Durable Equipment	8.9	5.1	3.1	4.0
Net Change in Business Inventories	3.5	— .5	.6	— 1.7
Net Exports of Goods and Services	1.5	.2	1.8	— 2.1
Net Exports and Monetary Use of Gold and Silver	.2	.1	.1	*
Consumer Goods and Services	74.6	81.9	90.9	97.6
Durable Goods	9.1	6.3	6.6	6.7
Non-Durable Goods	40.1	47.9	55.1	60.0
Services	25.4	27.6	29.3	30.9
NATIONAL INCOME BY DISTRIBUTIVE SHARES.	96.9	122.2	149.4	160.7
Total Compensation of Employees	64.5	84.1	106.3	116.0
Salaries and Wages	60.8	80.8	103.1	112.8
Supplements	3.7	3.3	3.2	3.2
Net Income of Proprietors	15.8	20.6	23.5	24.1
Agricultural	6.3	9.7	11.9	11.8
Non-Agricultural	9.6	10.9	11.6	12.3
Interest and Net Rents	8.0	8.8	9.7	10.6
Net Corporate Profits	8.5	8.7	9.8	9.9
Dividends	4.5	4.3	4.3	4.5
Savings	4.0	4.4	5.5	5.4
DISPOSITION OF NATIONAL INCOME				
National Income	96.9	122.2	149.4	160.7
Add: Transfer Payments	2.5	2.7	3.2	5.3
Less: Corporate Savings	4.0	4.4	5.5	5.4
Contributions to Social Insurance Funds	2.6	3.2	3.8	3.9
Equals: Income Payments to Individuals†	92.7	117.3	143.1	156.8
Less: Personal Taxes and Non-Tax Payments	4.0	6.7	18.5	19.3
Federal	2.0	4.7	16.6	17.2
State and Local	2.0	2.0	2.0	2.0
Equals: Disposable Income of Individuals	88.7	110.6	124.6	137.5
Less: Consumer Expenditures	74.6	81.9	90.9	97.6
Equals: Net Savings of Individuals	14.2	28.8	33.7	39.9
RELATION OF GROSS NATIONAL PRODUCT TO NATIONAL INCOME				
National Income	96.9	122.2	149.4	160.7
Business Tax and Non-Tax Liabilities	18.5	23.1	27.4	29.3
Depreciation and Depletion Charges	7.0	7.6	8.2	8.4
Other Business Reserves	.8	.7	.7	.7
Capital Outlay Charged to Current Expense	1.3	1.1	.8	.9
Inventory Revaluation Adjustment	— 3.2	— 2.1	— .2	— .1
Adjustment for Discrepancies	— .8	— 1.1	1.6	— 1.1
Gross National Product or Expenditure	120.5	151.5	187.8	198.7

* Less than \$50,000,000.

† Wage payments retroactive to 1943 amounting to 0.2 billion dollars were made to railroad workers under agreements reached in January 1944. These are included in national income for 1943, but in income payments for 1944.

conomic motion that we made. The preferred solution—with variations—was to add up the separate returns to individuals, in money, in kind, or imputed—notably salaries, wages, earnings of proprietors and partners, dividends, interest, rents, and royalties, and undistributed corporate profits (plus Government net savings or deficit in one prominent series⁵). An example of earnings in kind is food consumed on farms; of imputed earnings, an assumed rental value for owner-occupied homes.⁶ A total of this general character was regarded as equivalent to National Income as measured by the United States Department of Commerce.

In the view of a gentleman widely regarded as the dean of the income estimating profession—Dr. Simon Kuznets—this total would also be the equivalent of the *net value* of all goods and services produced. How would this identity be reasoned? In terms of business accounting—after consolidation to eliminate inter-company duplications—this total would approximate the amount remaining from national sales (including the value of Government services as measured by their cost) after deducting (1) depreciation, (2) depletion of national resources, and (3) business taxes.

Barometer of Annual Output

The struggle for a good concept has been long and conscientious. Probably all intellectual differences over constituent elements will never be fully resolved. In fact a number of series serving the same general purpose, but exhibiting variations, exist concurrently today.

The actual process of estimating national income runs to inexpressible detail, and tomes on it keep streaming from the press. Specialists in the field will be properly shocked by this oversimplification, but it will have to serve as background for the important and rather fascinating controversies that have recently flared over gross national product, particularly in relation to the post-war full employment issue. Among the ramifications that follow it is well to cling to one idea like a leech. One of the main purposes is to develop a symbol that will reflect ac-

⁵ That of Dr. Simon Kuznets and the National Bureau of Economic Research.

⁶ The last example appears in the National Income Series of Dr. Simon Kuznets and the National Bureau of Economic Research, but not in that of the Department of Commerce. Recently, however, the Department has indicated an intention to include it.

tual changes in our net national output of goods and services from year to year.

Naturally, adjustments have to be made for price changes, and this is also done in a separate series. This little one-sentence appendix is probably the grossest over-simplification of all⁷. Price changes run unevenly through the entire massive catalog of products and services, and, even if enough facts were available, impossibly intricate calculations would be necessary to account for them completely. Experimentation goes on continuously in the search for groupings that will catch the major shifts and still leave time for living.

Companion Records

Principally to complete the record and permit later casual references as needed, it is well to note that quite a family of statistical series has come to surround this central figure of national income, some of them derived, some independently computed. Their uses are likewise sometimes mutually supporting, sometimes distinct. They are frequently quoted under the wrong label, with misleading results. Among the familiar subdivisions used by the Department of Commerce are income payments, disposable income, consumers' purchases, consumers' expenditures for goods and services, and savings.

The purpose of the "Income Payment" series is to arrive at the amount of money or its equivalent that is actually received by individuals (including some institutions such as savings banks and life insurance companies and non-profit organizations). All of the money credited to individuals under national income obviously does not reach them. Individuals by definition do not receive undistributed corporate profits. Contributions to retirement and Social Security funds are additional examples of sums withheld. On the other hand conventional earnings are often sweetened by special disbursements such as unemployment and old age benefits, retirement pensions, relief, and war service pensions. The new total of income payments obviously has a significance differing markedly from that of national income itself.

⁷ Efforts to make dollar values reflect changes in actual physical output meet with extraordinary difficulties. In the April 1943 *Survey of Current Business*, S. Morris Livingston cites the case of a machine tool that may weigh twice as much, cost three times as much, do four times as much work, and operate to much closer tolerances than the most nearly equivalent machine produced ten years ago. If the same number of machines are produced, he asks, what is the change in physical output?

But the individual citizen does not enjoy the free spending of even the money he receives. In these days particularly it is hardly necessary to mention that personal taxes must be subtracted from income payments before there can be a genuine "Disposable Income" series.

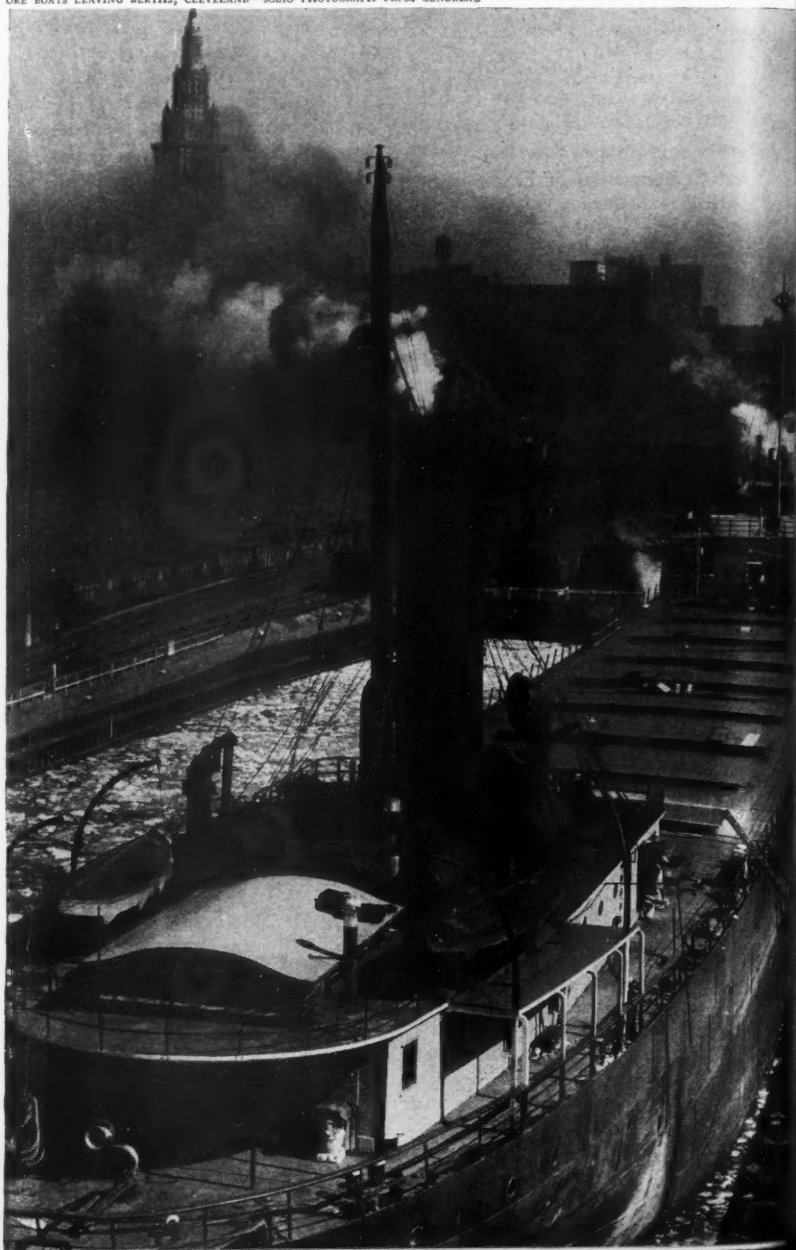
The "Consumers' Purchases" total is derived by deducting Government expenditures and private gross capital expenditures from gross national product. A "Consumers' Expenditures" series, however, is being meticulously built up from trade data and special surveys; it covers actual expenditures, and obligations for payments currently incurred. This latter work has been going on for several years, and when complete will presumably replace the

present derived figure of "Consumers' Purchases" for most purposes. With respect to consumer expenditures alone techniques have been developed for the coverage of about 180 items (45 goods and 135 services); with respect to capital formation, for about 30 items. Still others are being gradually extricated from the repulsive fate of "miscellaneous residue."

There are a number of series on the savings of individuals, corporations, and entrepreneurs. Some are residuals; for example, "Net Savings of Individuals" are assumed by the Department of Commerce to be the amount left after deducting "Consumers' Purchases" from "Disposable Income." Others are built up from diverse pub-

(Continued on page 51)

ONE BOATS LEAVING BERTHS, CLEVELAND—SOZIO PHOTOGRAPH FROM GENDREAU





MEN GOING TO WORK, ANACONDA COPPER MINING COMPANY, ANACONDA, MONT.—CUSHING PHOTOGRAPH

A Guide to Post-War Development

HOW REGIONAL BAROMETERS HELP

L. D. H. WELD

Director of Research, McCann-Erickson, Inc.

*W*HERE should we have more dealers after the war? Where shall we place more advertising, more salesmen, and other sales effort? Where shall we need new branch houses and warehouses? Where shall we place new stores (in the case of a chain-store company that wants to expand)? Where should we place new manufacturing plants?

These and other questions are of vital interest to distributors who want to take full advantage of the many changes taking place because of the war situation. The problem simmers down largely to a question of where

war-time trends will continue after the war is ended.

Many studies have been made for this purpose. Most of them take cognizance of the fact that there have been unusual shifts in population. The studies that have attracted the most attention in this field are those of Dr. Philip M. Hauser, Assistant Director, United States Bureau of the Census.

Without attempting to analyze these population shifts, it may be said that from 1940 to 1943 population losses occurred in 36 States, with a maximum loss of 15.6 per cent in North Dakota; population gains in 12 States and the

District of Columbia, with maximum gains of 26.7 per cent taking place in the District of Columbia and 25.7 per cent in Nevada.

No one knows how many people will continue to live in the States to which they have migrated during the war, but Dr. Hauser has attempted to indicate those metropolitan areas where population increases are most likely to prove permanent. He has done this by examining the rates in population growth from 1920 to 1930 and from 1930 to 1940. The thought is that those sections that enjoyed most rapid population increases before the war are most likely

to retain their war-time increases after the war.

All this is helpful as one indicator. But an examination of the types of war industries that have attracted workers from other States also is of value. For example, where shipbuilding plants have attracted workers, the fact that this industry can not be readily converted to peace-time industries, should be taken into consideration. Even if a large proportion of the immigrants to such communities should continue to live in them, the prospects for business prosperity for a period after the war are not particularly promising.

There are other factors that should also be taken into account besides type of industry, such as actual population, and possibly population per square mile, as well as rate of increase. Although Nevada has had the greatest rate of growth during the war, the increase was less than 30,000 and the total population is less than 150,000. Thus this State is not one in which a company would need to put many salesmen or warehouses. New York, on the other hand, lost 5.7 per cent of its population, but it still had over 13,000,000 people, or 9.9 per cent of the country's total. It, of course, calls for intensive cultivation from a sales standpoint.

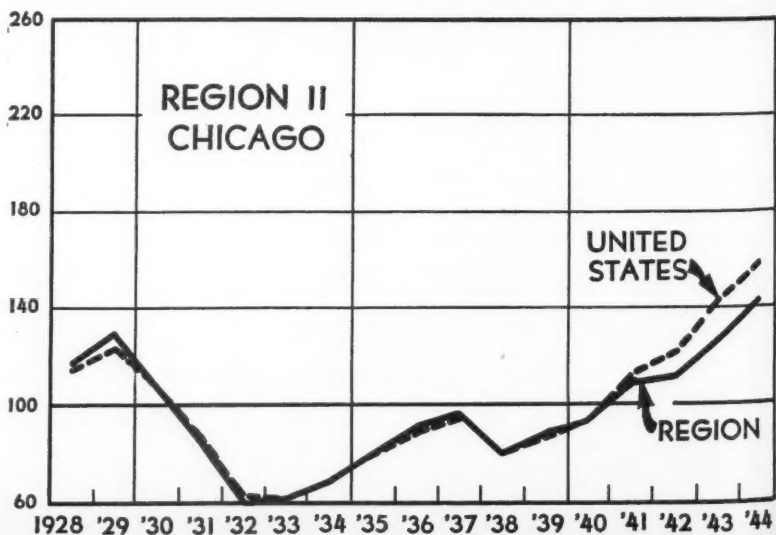
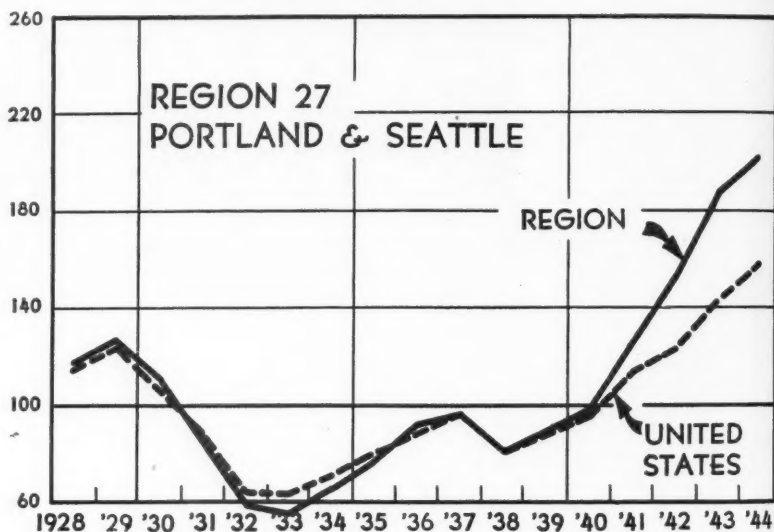
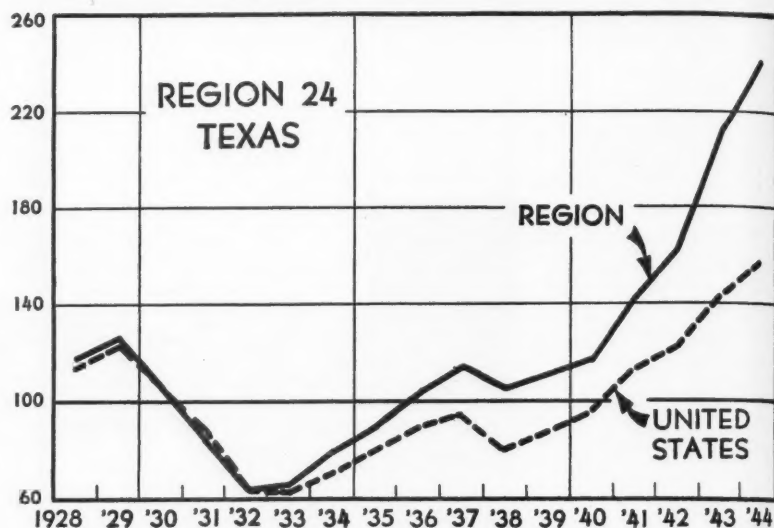
Regional Barometers

Other guides are income (actual and per capita), retail sales, wholesale sales, labor rates, and so on. This article will discuss the Regional Barometers, published by DUN & BRADSTREET, INC., over a series of years as another clue as to where continued expansion may be expected after the war.

Here again, as in Dr. Hauser's work on population, the thought is that trends which were taking place before the war are likely to continue after the war is over. Those regions where the barometers were advancing beyond the average for the United States as a whole before the war are the regions that are apt to have more than average growth after the war.

In the comparisons for this purpose, it is helpful to consider the barometers as they appeared in DUN'S STATISTICAL REVIEW before they were revised in the Summer of 1944, because the barometers then ran back to 1928 whereas the current barometers begin with 1935. In the former barometers 100 equalled the average of the five years 1928-1932, whereas the base period now is the average of the five years 1935-

REGIONAL COMPARISONS WITH THE UNITED STATES



In the above charts, regional barometers are represented by a solid line and United States by a broken line. The barometers are seasonally adjusted and 1928-1932=100. Texas is typical of regions which increased beyond the U. S. average before and during the war, Portland and Seattle of regions which were running even and then rose, and Chicago of those which continued under the national average.



RIGGING UP OIL WELL EQUIPMENT, MADISON COUNTY, WISCONSIN—STANDARD OIL COMPANY (N. J.) PHOTOGRAPH

1939, but this is not important in the comparisons that this article aims to bring out.

In presenting these barometers each month in DUN'S STATISTICAL REVIEW, a chart is shown for each of the 29 regions into which the United States is divided. In each chart the barometer for the region is shown as well as the barometer for the United States as a whole.

Examination of the charts shows that these 29 regions can be grouped into five classes. (The 29 regions are shown in the map on page 18.) The five classes are:

1. Those that were exceeding the U. S. average before the war, and have continued above this average during the war years.

An outstanding example of this group is the TEXAS region, region 24. The accompanying chart compares the barometer for this region with the barometer for the United States as a whole.

It will be seen from this chart that immediately after the bottom of the depression in 1933 the TEXAS barometer began to forge ahead of the United States barometer, long before the war could have exerted any influence. During the war years, the barometer for this region continued well above the average for the nation. There is every indication that, although this region has profited from the war, the upward trend of its barometer is a long-time trend and is likely to continue after the war.

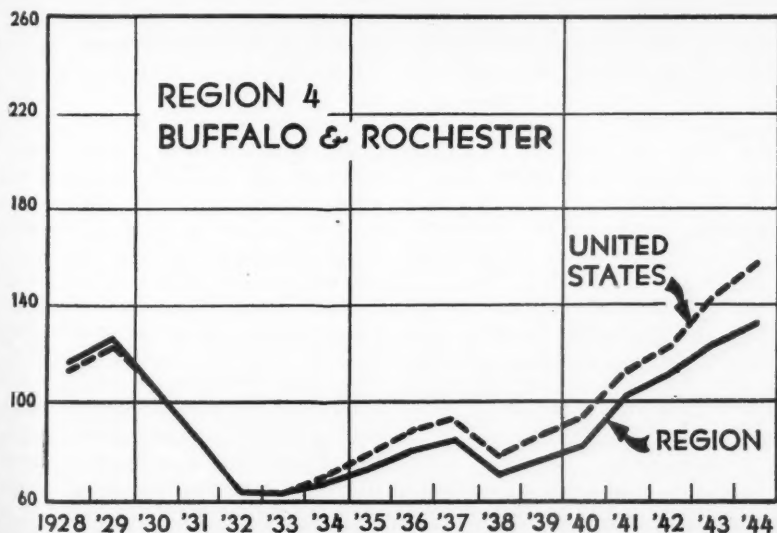
The eight regions with this definite tendency to increase beyond the U. S. average before the war are:

24. TEXAS
9. CINCINNATI AND COLUMBUS
10. INDIANAPOLIS AND LOUISVILLE
18. MARYLAND AND VIRGINIA
19. NORTH AND SOUTH CAROLINA
20. ATLANTA AND BIRMINGHAM
21. FLORIDA
25. DENVER

Four other regions with this pre-war upward tendency, but only to a slight degree, are:

13. MILWAUKEE
22. MEMPHIS
23. NEW ORLEANS
26. SALT LAKE CITY

2. The next group includes those regions in which the averages were running practically even with the United States average before the war, but in which the barometers have gained over



The chart of the Buffalo and Rochester Region is typical of those regions whose barometers were falling below the country's average before the war and whose war activities have not been sufficient to bring the barometers up to this average during the war. A detailed description of barometer use is contained in a reprinted article entitled "How to Use the Regional Trade Barometers" available upon request.

that of the United States during the war. An outstanding example of this group is the PORTLAND AND SEATTLE region, region 27. The chart on page 16 indicates how, beginning with 1942, the barometer has gone way ahead of the United States average.

The six regions in which the barometers have war-spurred ahead of the national increase after following along with it in pre-war days are:

- 27. PORTLAND AND SEATTLE
- 8. CLEVELAND
- 12. DETROIT
- 17. KANSAS CITY
- 28. SAN FRANCISCO
- 29. LOS ANGELES

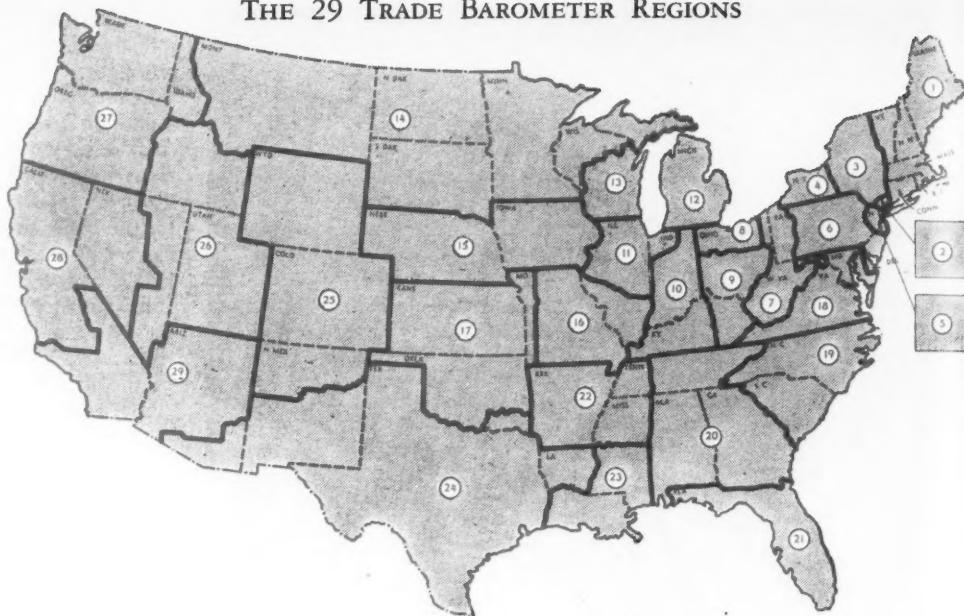
In this group it is apparent that the gains since 1941 have been due principally to war activities. In these regions immediate post-war growth in comparison with the United States is more or less problematical depending largely on the extent to which their war-time industries can be converted to peace-time pursuits. The PORTLAND-SEATTLE region, region 27, for example, owes its war-time prosperity largely to new shipbuilding activities which cannot readily be converted. The CLEVELAND region, region 8, on the other hand, owes its war-time prosperity largely to activity of miscellaneous industries that were already in existence, many of which can be reconverted fairly quickly.

3. A third group of regions consists of those in which the advances were keeping pace with the United States average before the war, but which, while still advancing, have not kept up with the latter average during the war years. A good example is the CHICAGO region, region 11, for which the barometer is shown in the chart on page 16.

There are four regions in this group; they are:

- 11. CHICAGO

THE 29 TRADE BAROMETER REGIONS



- 7. PITTSBURGH
- 3. ALBANY, UTICA, AND SYRACUSE
- 16. ST. LOUIS

These regions have not prospered through the war effort quite as much as has the United States as a whole. These regions may be expected to resume their advance along with the country as a whole after the war is over.

4. The fourth group of regions consists of those that were falling slightly below the United States average before the influence of the war was felt and have continued under this average while the war has been in progress. The chart for the BUFFALO AND ROCHESTER region, region 4, is typical of this group.

The five regions lagging behind the United States average are:

- 4. BUFFALO AND ROCHESTER
- 1. NEW ENGLAND
- 2. NEW YORK CITY
- 5. NORTHERN NEW JERSEY
- 6. PHILADELPHIA

Besides falling slightly below the country's average before the war, war activities have not been sufficient to bring the barometers of these regions up to average during the war. Although these regions will continue to advance after the war, their commercial growth cannot be expected to be as rapid as can that of the country.

5. Finally, there is a fifth group, consisting of two regions which have kept

pace with the country as a whole, both before and during the war. Their advancement as compared with the United States has not been affected one way or the other by war activities. They can be expected to continue this relationship in the future. The two regions in this group are:

- 14. MINNEAPOLIS AND ST. PAUL
- 15. IOWA AND NEBRASKA

IN CONCLUSION, a word of warning: Any section of the United States is a good one for future expansion of sales activities. Every section is growing. Although the Northeastern section is not keeping pace with the rest of the country, it is the richest in per capita wealth, income, retail sales, and so on, and, of course, deserves intensive cultivation from a sales standpoint.

It is only when we consider the rate of growth in the past and in the future that we see that other sections of the country are most likely to enjoy more rapid growth. And the most interesting lesson to be drawn from this analysis is the fact that most of the regions in the first group, those that were expanding rapidly before the war and that are most likely to continue this rate of growth for a period after the war, are Southern regions. The Far West will undoubtedly continue to grow after the war—and in the long run may be the "best" section as to future growth—but so far as present trends are concerned, the South is the most rapidly developing section.

Industrial Production

Seasonally Adjusted Index; 1935-1939 = 100; Federal Reserve Board

	1942	1943	1944	1945
January	181	227	243	214
February	183	232	244	233
March	186	235	241	
April	187	237	239	
May	191	239	236	
June	193	237	235	
July	197	240	230	
August	204	243	232	
September	208	244	230	
October	215	247	232	
November	220	247	232	
December	223	241	232	

Cost of Living

Index; 1935-1939 = 100; U. S. Bureau of Labor Statistics

	1942	1943	1944	1945
January	112.0	120.7	124.2	127.1
February	112.9	121.0	123.8	
March	114.3	122.8	123.8	
April	115.1	124.1	124.6	
May	116.0	125.4	125.1	
June	116.4	124.8	125.4	
July	117.0	123.9	126.1	
August	117.5	123.4	126.4	
September	117.8	123.9	126.5	
October	119.0	124.4	126.5	
November	119.8	124.2	126.6	
December	120.4	124.4	127.0	

Wholesale Commodity Prices

Index; 1926 = 100; U. S. Bureau of Labor Statistics

	1942	1943	1944	1945
January	96.0	101.9	103.3	104.9
February	96.7	102.5	103.6	105.0*
March	97.6	103.4	103.8	
April	98.7	103.5	104.0	
May	98.6	104.1	104.0	
June	98.6	103.8	104.3	
July	98.7	103.2	104.1	
August	99.2	103.1	103.9	
September	99.6	103.1	104.0	
October	100.0	103.0	104.1	
November	100.3	102.9	104.4	
December	101.0	103.2	104.7	

Employment

Millions of Persons; U. S. Bureau of Census

	1942	1943	1944	1945
January	49.1	51.4	50.4	50.1
February	49.6	51.2	50.3	
March	50.2	51.2	50.5	
April	51.1	51.6	51.3	
May	52.0	52.6	51.9	
June	53.7	54.0	53.2	
July	54.3	54.8	54.0	
August	54.4	54.4	53.2	
September	52.0	53.0	52.3	
October	53.2	52.2	52.2	
November	52.6	51.7	51.5	
December	52.2	51.0	50.6	

Retail Sales

Seasonally Adjusted Index; 1935-1939 = 100; U. S. Dept. of Com.

	1942	1943	1944	1945
January	153.2	159.5	172.7	191.1*
February	148.3	170.2	176.4	
March	147.6	163.2	179.5	
April	146.0	160.1	168.4	
May	145.4	156.5	171.7	
June	141.8	164.5	171.2	
July	147.6	165.1	177.0	
August	150.3	167.7	178.0	
September	150.9	165.5	174.5	
October	154.3	168.3	183.6	
November	158.2	172.5	191.5	
December	153.9	171.4	187.9	

Industrial Stock Prices

Monthly Average of Daily Index; Dow-Jones

	1942	1943	1944	1945
January	111.1	121.52	137.74	153.95
February	107.38	127.40	135.97	157.13
March	101.62	131.15	141.75	
April	97.79	134.60	137.19	
May	98.42	138.66	139.22	
June	103.75	141.25	145.46	
July	106.00	142.00	148.37	
August	107.08	136.34	146.72	
September	107.41	138.00	145.20	
October	113.51	138.25	147.68	
November	115.31	132.66	146.88	
December	117.16	134.57	150.35	

* Approximation; figure from quoted source not available.

THE TREND OF BUSINESS

SUMMARY: Pressure for war goods has been an underlying factor in the continued high level of industrial output. Factory employment remains below a year ago. Consumer buying of seasonal lines boosts retail volume above earlier records. Commodity prices reach new wartime peaks.

INDUSTRIAL output in February was about 4 per cent below a year ago, but production generally remained at a high level. Unusually bad weather in some industrial areas and transportation difficulties retarded some plant operations; in Eastern States shipment tie-ups affected temporarily the iron and steel, textile, chemical, paper, and some processed food industries. Manufacturing output, however, was higher than in any period since June 1944, with the major increases in non-durable goods.

Direct war production, however, continues high as heavy industry schedules are further increased. Orders received by manufacturers remain at a high point, close to 20 per cent above last year. The backlog of unfilled orders continues to increase as war needs mount. While output in the critical industries increased about 5 to 10 per cent above the level of recent months, over-all war production in February continued to decrease and was below schedule. Output of tanks and heavy trucks declined more than that of any other war items. Critical aircraft pro-

duction, chiefly bombers, increased but schedules were not met; total aircrafts produced in January were 6,535, or 2 per cent below a month earlier and 4 per cent below schedule.

Of importance was the setback in steel production during the last part of January and the first half of February; bad weather, the fuel supply situation, and manpower shortages were chief hindrances. Bookings have increased considerably and delivery dates have been further extended. Products in particularly heavy demand included sheets, rails, semi-finished steel, and tin plate; shell and small arms requirements have mounted.

Non-ferrous metals are again being demanded in large quantities. Slab zinc output in February, while about 12 per cent below 1944, is slightly above the previous month. Zinc deliveries have improved somewhat in recent weeks and are close to 50 per cent above a year ago. While output of aluminum sheet has increased, supplies continue scarce and are expected to meet only three-fourths of the requirements for the first quarter of 1945.

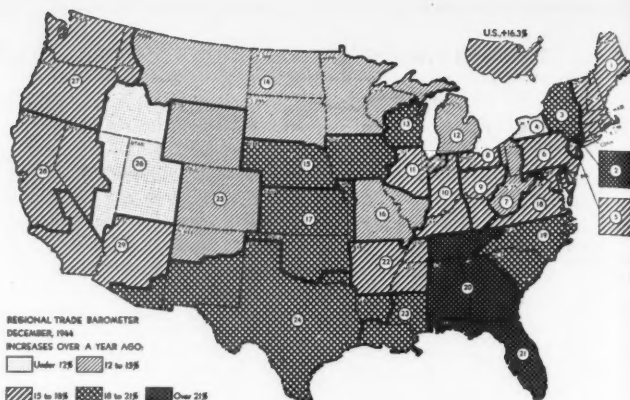
Paper and paperboard production declined in February; output of paperboard was 604,364 tons, 17 per cent below January, but 2 per cent above a year ago. Paper supplies are far below current needs, reflecting shortages in wood pulp and waste paper. The container scarcity is extremely severe with essential needs taking a large proportion of the output.

Although rayon production increased about 16 per cent above a year ago, almost all of this increase was in essential viscose tire yarn; about 54 per cent of rayon output is going for war requirements. The amount of rayon yarn available for civilian apparel use has declined about 20 per cent since 1941. Cotton consumption in January increased 12 per cent above December and 4 per cent above a year ago.

Employment—While there has been a slight easing in manpower needs in some industries and in some sections of the country, labor shortages generally still prevail in many vital programs as war requirements expand. Employment in January increased

REGIONAL TRADE REPORTS

The DUN's REVIEW Trade Barometers (1935-1939 = 100) are compiled under the supervision of Dr. L. D. H. Weld. In this summary seasonally adjusted figures are used. Regional information is gathered through local DUN & BRADSTREET offices. Payroll and employment figures are from Government sources. More detailed data are available in DUN's STATISTICAL REVIEW. Barometer figures may be obtained in advance of publication.



Dec. 1944	% Change from Nov. '44	% Change from Dec. '43	HIGHLIGHTS OF TRADE ACTIVITY
UNITED STATES			Seasonally adjusted index below November all-time high; consumer buying was 16.3% over 1943 and 66% over December 1939.
189.3	- 8.5	+16.3	
1. NEW ENGLAND			Best barometer comparison with U. S. in eight months. Industrial output 9% below 1943; employment moderately below last year.
166.7	- 2.1	+17.3	
2. NEW YORK CITY			New York and Bridgeport employment below 1943; New York payrolls steady, Bridgeport down 13%. Hotel sales 11% above last year.
154.1	-10.7	+24.5	
3. ALBANY, UTICA, SYRACUSE			Sharp employment and payroll declines from 1943 in Utica and Albany-Schenectady-Troy regions; Syracuse employment down 10%, payrolls down 3%. Modest retail gains over 1943 maintained.
181.3	- 5.3	+18.0	
4. BUFFALO, ROCHESTER			Rochester employment 2% below 1943, Buffalo down 13%; larger declines in Batavia and Niagara Falls. Third shifts discontinued in some Buffalo plants. Index dipped to 4% below country's level.
182.5	-14.3	+ 9.2	
5. NORTHERN NEW JERSEY			Index 15% below U. S. New Jersey farm prices slightly below 1943. Newark and Elizabeth industrial employment moderately below a year ago, Elizabeth payrolls down 7%.
160.0	- 7.5	+17.4	
6. PHILADELPHIA			Employment and payrolls unchanged in recent months; Pennsylvania down 6 and 1% and Delaware down 5 and 4% respectively.
170.8	-11.8	+17.7	
7. PITTSBURGH			Pittsburgh and Erie industrial employment below last year. Business activity 10% below 1943 in Erie, Pittsburgh 2%; Sharon up 3%.
163.1	-13.4	+14.8	
8. CLEVELAND			Output of rubber products up; program includes expansion of plant facilities. Region's barometer slightly above national.
191.5	-11.8	+17.9	
9. CINCINNATI, COLUMBUS			Columbus business activity about 7% above 1943; industrial employment slightly below last year. Barometer dropped below level of U. S. after two months of favorable comparisons.
189.2	- 9.2	+17.7	
10. INDIANAPOLIS, LOUISVILLE			Indiana employment about 7% below last year; payrolls down 3%. Kentucky 1944 livestock receipts 3% above 1943; Indiana farm prices 2% over 1943. Employment and payrolls in ammunition plants up.
205.2	- 6.9	+16.1	
11. CHICAGO			Employment in principal industrial cities about even with a year ago, payrolls down slightly. Barometer only slightly above U. S. level.
181.4	- 7.2	+17.5	
12. DETROIT			Barometer slightly over U. S. level for third consecutive month. Michigan employment 9% below 1943; payrolls off 13%.
193.2	-10.3	+14.3	
13. MILWAUKEE			Industrial payrolls 2% over last year; greater rises in Appleton, Green Bay, Janesville, Stevens Point, Two Rivers, Wausau.
201.1	- 7.1	+18.0	
14. MINNEAPOLIS, ST. PAUL			Reports indicate halt in declining payrolls in mines due to larger metal requirements. Improving in past six months, region's barometer now only 3% below U. S. level.
183.2	- 6.2	+14.6	
15. IOWA, NEBRASKA			Monthly employment gains in most cities, but Burlington, Fort Madison, and Newton. Condition of growing wheat crop good; winter moisture reported ample. Flour milling activity slightly below 1944.
182.6	- 7.6	+18.3	
16. ST. LOUIS			Cotton acreage goal for 1945, 92% of 1944 acreage. Monthly industrial employment gains in East St. Louis, Quincy, Akron-Wood area.
179.0	-11.5	+14.4	
17. KANSAS CITY			Stocks of corn for grain purposes 65% ahead of last year in Kansas, up 62% in Oklahoma. Kansas employment somewhat below last year.
199.6	- 9.2	+19.4	
18. MARYLAND, VIRGINIA			Gain of regional barometer over U. S. rose to 15%. Baltimore and Maryland factory employment and payrolls continue to run moderately below last year. Richmond cigarette production 10% below last year.
217.9	- 7.2	+16.4	
19. NORTH, SOUTH CAROLINA			North Carolina cotton goal 104% and South Carolina 102% of actual acreage planted in 1944. North Carolina industrial employment little changed in month, below last year's peak level.
222.8	- 5.9	+18.6	
20. ATLANTA, BIRMINGHAM			Alabama employment maintained large gains during year; Tennessee employment steady. Despite large monthly barometer drop, index was 22% above U. S. level. Georgia cotton output off 4% from last year.
231.4	- 9.6	+21.1	
21. FLORIDA			Highest barometer in country, now 34% above national. Miami, Tampa, Jacksonville factory employment little changed from previous months.
254.5	+ 1.8	+26.2	
22. MEMPHIS			Small employment and payroll gains during the month. One of two monthly increases holds index 17% above national level.
221.1	+ 1.8	+15.5	
23. NEW ORLEANS			New Orleans industrial employment moderately below last year; monthly trend irregularly downward. Wholesale trade about 7% above last year.
225.7	- 1.9	+20.2	
24. TEXAS			Largest factory payroll gains over 1944 in Sherman, Abilene, Port Arthur, El Paso; declines in Fort Worth, Wichita, Wichita Falls, Galveston. Index third highest in nation, 27% above U. S.
239.7	- 0.4	+20.0	
25. DENVER			Ranze conditions good in New Mexico. Industrial employment continues to run well below last year's high level. Index remained 5% below U. S.
179.8	- 5.3	+12.3	
26. SALT LAKE CITY			Output of mining and associated industries, coal excepted, reported 20% below last year due to labor shortages.
218.6	- 1.1	+ 8.1	
27. PORTLAND, SEATTLE			Factory employment in most cities has fallen steadily from high levels of last year. Milling and logging operations at peak levels. Yearly index comparison with U. S. poor for third consecutive month.
247.2	- 4.1	+16.1	
28. SAN FRANCISCO			Orange crop estimated 14% above 1944. San Francisco industrial employment fell 9% during 1944, payrolls declined 4%.
210.4	- 9.3	+17.3	
29. LOS ANGELES			Los Angeles industrial employment dropped 8% during 1944; declines concentrated in aircraft industry; shipyards report increases.
205.4	-11.9	+17.4	

chiefly in iron and steel, chemical, and small arms ammunition industries, offsetting declines in other essential manufacturing lines; the number of employees in the iron and steel industries increased by 4,000 persons and the number in chemicals increased by 8,000. The month's decline of 87,000 manufacturing wage-earners brought the total to 13,097,000 in January; this figure was 9 per cent below a year ago but was 37 per cent above January 1941. Decreases in factory employment were chiefly in the non-durable goods industries with the largest declines in wage-earners in the food, apparel, and textile groups.

Approximately two-thirds of the January's decline in non-agricultural employment was in the trade group; the number of employees in trade lines, however, was slightly above January 1944. The month's decrease in other industry groups was small.

Income—Reflecting the upswing in industrial output, payrolls increased again in January. While factory earnings are about 4 per cent below a year ago, they are approximately two-and-a-half times what they were in January 1941. Hourly and weekly wages continue at a very high level and have reached all-time peaks in some essential industries.

Some increases in wages in manufacturing, trade, and transportation industries and longer working hours were responsible for the rise in income payments to individuals in December. Payments, totalling \$14,388,000,000, were the highest on record and were 9 per cent higher than a month earlier and 6 per cent above a year ago. The usual year-end disbursements of dividends and interest accounted for the major part of the monthly gain (U. S. Department of Commerce).

Prices—The gradual increase in most commodity prices continued; the USBLs wholesale commodity index reached a new wartime peak in February. The index of commodity prices for that month was estimated at 105.0 per cent of the 1926 average, the highest since 1921. The February figure was slightly above a year ago and about 30 per cent above February 1941. Higher prices for livestock, building material, and pig iron were partly responsible for the gain in the index.

Retail prices in January remained unchanged for the eleventh successive month. The fractional gain of 0.1 per cent over February 1, 1944, resulted from increases in the price of men's apparel and housefurnishings.

Reflecting the rise in prices of housefurnishings and clothing, the USBLs cost of living index in January rose fractionally to 127.1 per cent of the 1935-1939 average. The January index was 2.3 per cent above a year earlier and 26 per cent above January 1941.

Retail—Throughout February retail volume was at an exceptionally high level, 15 to 20 per cent above the record point of a year ago. This was in spite of the unusually cold weather in some sections of the country, which caused wide daily fluctuations in consumer purchasing. Shortages continue to exert an influence on retail buying habits. Departments handling white goods and other staples were crowded.

In January, according to the DUN'S REVIEW seasonally adjusted Regional Trade Barometer of consumer buying, 28 regions had increases over a year ago. The year-to-year decrease in the Buffalo and Rochester Region (4) was attributed to the severe weather conditions which curtailed trade and industry in that area. The largest increase was in the Portland and Seattle Region (27), reflecting the mounting tempo of war output.

Wholesale volume in February remained generally steady with a year ago although scarcities continued in most lines. Delivery schedules were of utmost importance; buyers checking on schedules found them further extended.

Finance—Following the pace set in January, trading in the stock market throughout February moved to a new high ground. Stock prices reached new peaks; industrials and rails attained the best level for that month since 1937

SIGNIFICANT INDICATORS

COMPILED BY THE PUBLISHERS OF "DUN'S REVIEW"

More detailed figures appear in DUN'S STATISTICAL REVIEW.

THE FAILURE RECORD

	Jan. 1945	Dec. 1944	Jan. 1944	Per Cent Changed
DUN'S INSOLVENCY INDEX*				
Unadjusted	5.1	6.0	7.7	- 34
Adjusted, seasonally...	4.6	6.1	6.8	- 32
NUMBER BY SIZE OF DEBT				
Under \$5,000	80	93	120	- 33
NUMBER BY SALES OF DEBT				
Under \$5,000	18	20	50	- 64
\$5,000-\$25,000	36	44	53	- 32
\$25,000-\$100,000	18	10	14	+ 20
\$100,000 and over	8	1	3	+167
NUMBER BY INDUSTRY GROUPS				
Manufacturing	34	36	31	+ 10
Wholesale Trade	2	11	13	- 85
Retail Trade	26	36	50	- 48
Construction	10	4	13	- 23
Commercial Service	8	6	13	- 38
(Liabilities in thousands)				
CURRENT LIABILITIES	\$5,883	\$1,804	\$1,708	+244
TOTAL LIABILITIES	\$9,533	\$1,804	\$1,708	+458

* Apparent annual failures per 10,000 enterprises.
† Per cent change of January 1945 over January 1944.

FAILURES BY DIVISIONS OF INDUSTRY

	Number January		Liabilities January	
(Current liabilities in thousands of dollars)	1945	1944	1945	1944
MINING, MANUFACTURING	34	31	2,128	893
Mining—Coal, Oil, Misc.	4	..	449	..
Food and Kindred Products ..	3	4	163	66
Textile Products, Apparel ..	3	1	41	4
Lumber, Lumber Products ..	3	5	71	206
Paper, Printing, Publishing ..	1	4	250	48
Chemicals, Allied Products ..	1	..	1	..
Leather, Leather Products ..	1	1	14	10
Stone, Clay, Glass Products ..	2	2	103	85
Iron, Steel, and Products ..	3	2	162	53
Machinery	3	5	188	115
Transportation Equipment ..	6	2	610	200
Miscellaneous	4	5	85	106
WHOLESALE TRADE	2	13	24	223
Food and Farm Products ..	..	6	..	49
Apparel .....	..	1	22	5
Lumber, Bldg. Mats., Hdw. ..	..	2	..	125
Miscellaneous	1	4	2	44
RETAIL TRADE	26	50	254	304
Food and Liquor	6	14	65	84
General Merchandise	3	2	9	4
Apparel and Accessories ..	2	4	20	16
Furniture, Furnishings ..	1	2	8	9
Lumber, Bldg. Mats., Hdw. ..	1	2	10	13
Automotive Group	2	5	11	49
Eating, Drinking Places ..	6	12	30	91
Drug Stores	2	2	41	9
Miscellaneous	3	7	60	29
CONSTRUCTION	10	13	855	183
COMMERCIAL SERVICE	8	13	2,622	105
Highway Transportation ..	3	2	2,565	47
Laundries, Cleaning, Dyeing ..	2	2	41	24
Other Personal Services ..	1	6	4	23
Business, Repair Service ..	2	3	12	11

FURTHER INFORMATION

Due to war-time restriction on use of paper and the desire to conserve as much space as possible, the features appearing on this page are necessarily given in very abbreviated form.

MORE DETAILED data on the various subjects are published each month in DUN'S STATISTICAL REVIEW. For example, building permit values for each of the 215 cities are given, with a breakdown by geographical regions. (A ten-year record of building permit values for 215 cities is available upon request.) With the bank clearing data there is also comparative data for the three preceding years, for the preceding month, and cumulative data for the year.

FAILURE STATISTICS are presented by States, by large cities, by Federal Reserve Districts, by industries and trades, and by size of liabilities. Canadian failure statistics by Provinces are included.

THE WHOLESALE price indexes are presented for a much longer period of time. There is also a summarized presentation of other wholesale price index numbers, both United States and foreign. . . . The annual subscription to DUN'S STATISTICAL REVIEW is \$1 a year.

WHOLESALE FOOD PRICE INDEX

The index is the sum of the wholesale price per pound of 31 commodities in general use:

1945	1944	1945
Mar. 6.. \$4.10	Mar. 7.. \$4.03	High \$4.11 Feb. 13
Feb. 27.. 4.10	Feb. 20.. 4.02	Low 4.00 Jan. 2
Feb. 20.. 4.10	Feb. 22.. 4.03	1944
Feb. 13.. 4.11	Feb. 15.. 4.03	High \$4.09 Dec. 12
Feb. 6.. 4.10	Feb. 8.. 4.02	Low 3.98 May 23

DAILY WHOLESALE PRICE INDEX

The index is prepared from spot closing prices of 30 basic commodities. (1930-1932 = 100).

	1945		1944	
	Mar.	Feb.	Jan.	Dec.
1....	176.37	175.12	*	173.19
2....	176.31	175.23	175.16	173.26
3....	176.33	174.97	175.35	173.92
4....	176.46	175.42	175.38	173.17
5....	176.49	175.33	175.42	173.81
6....	176.50	175.36	175.42	173.81
7....	176.50	175.36	175.42	173.81
8....	176.50	175.36	175.42	173.81
9....	176.50	175.36	175.42	173.81
10....	176.50	175.36	175.42	173.81
11....	176.50	175.36	175.42	173.81
12....	176.50	175.36	175.42	173.81
13....	176.50	175.36	175.42	173.81
14....	176.50	175.36	175.42	173.81
15....	176.50	175.36	175.42	173.81
16....	176.50	175.36	175.42	173.81
17....	176.50	175.36	175.42	173.81
18....	176.50	175.36	175.42	173.81
19....	176.50	175.36	175.42	173.81
20....	176.50	175.36	175.42	173.81
21....	176.50	175.36	175.42	173.81
22....	176.50	175.36	175.42	173.81
23....	176.50	175.36	175.42	173.81
24....	176.50	175.36	175.42	173.81
25....	176.50	175.36	175.42	173.81
26....	176.50	175.36	175.42	173.81
27....	176.50	175.36	175.42	173.81
28....	176.50	175.36	175.42	173.81
29....	176.50	175.36	175.42	173.81
30....	176.50	175.36	175.42	173.81
31....	176.50	175.36	175.42	173.81

† Sunday. * Market closed.

BUILDING PERMIT VALUES—215 CITIES

Geographical Divisions:	1945	1944	% Change
New England	\$1,557,826	\$1,053,647	+ 47.9
Middle Atlantic	1,520,416	1,176,055	+ 29.3
South Atlantic	4,658,829	1,888,231	+ 146.7
East Central	5,899,265	8,030,841	- 26.5
South Central	4,895,602	4,065,133	+ 20.4
West Central	2,130,240	1,068,787	+ 100.0
Mountain	1,043,292	657,167	+ 59.7
Pacific	8,473,573	11,302,893	- 25.0
Total U. S.	\$44,767,043	\$33,042,794	+ 35.0
New York City	\$12,062,411	\$700,662	+1,749.9
Outside N. Y. C.	\$31,804,632	\$32,242,102	- 1.4

BANK CLEARINGS—INDIVIDUAL CITIES

	1945		1944		% Change
(Thousands of dollars)	1945	1944	1945	1944	% Change
Boston	1,649,727	1,605,112	2,759,000	2,759,000	+ 2.8
Philadelphia	2,944,000	2,759,000	2,759,000	2,759,000	+ 6.7
Buffalo	288,672	291,148	291,148	291,148	- 0.9
Pittsburgh	1,123,666	1,087,780	1,087,780	1,087,780	+ 3.3
Cleveland	977,509	933,988	933,988	933,988	+ 4.7
Cincinnati	551,578	498,953	498,953	498,953	+10.5
Baltimore	719,514	650,505	650,505	650,505	+10.6
Richmond	379,911	328,310	328,310	328,310	+15.7
Atlanta	726,000	598,800	598,800	598,800	+21.2
New Orleans	434,270	395,597	395,597	395,597	+13.6
Chicago	2,350,639	2,068,493	2,068,493	2,068,493	+13.6
Detroit	1,522,117	1,684,575	1,684,575	1,684,575	- 9.6
St. Louis	811,536	758,664	758,664	758,664	+ 7.0
Louisville	370,443	324,855	324,855	324,855	+16.8
Minneapolis	652,520	621,466	621,466	621,466	+ 5.8
Kansas City	957,721	851,622	851,622	851,622	+12.5
Omaha	338,610	330,654	330,654	330,654	- 0.3
Denver	272,914	250,748	250,748	250,748	+ 8.8
Dallas	617,638	482,244	482,244	482,244	+28.1
Houston	520,850	424,537	424,537	424,537	+22.7
San Francisco	1,341,397	1,184,083	1,184,083	1,184,083	+13.2
Portland, Ore.	348,819	314,322	314,322	314,322	+11.0
Seattle	393,934	338,733	338,733	338,733	+ 1.6
Total 23 Cities	20,307,994	18,812,759	18,812,759	18,812,759	+ 7.9
New York	28,043,152	23,293,346	23,293,346	23,293,346	+24.3
Total 24 Cities	49,251,146	42,106,105	42,106,105	42,106,105	+17.0
Daily Average	1,894,275	1,684,244	1,684,244	1,684,244	+12.5



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PAN AMERICAN pioneered overseas Air Express . . . In a single 12-month period, in Latin America alone, Pan American World Airways recently carried 22,921,396 lbs. of Air Express . . . almost two million pounds a month!

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and utilities were also at an eight-year high.

Government obligations held by Federal Reserve Banks in 101 leading cities on February 28 were \$43,912,000,000, a drop of \$345,000,000 under January 31 but an increase of \$5,014,000,000 over March 1, 1944. Curtailed loan commitments were responsible for the sixth consecutive weekly decline in earning assets of Federal Reserve member banks; total loans and investments were \$58,501,000,000 on February 28, \$745,000,000 below a month earlier but an increase of \$5,211,000,000 over March 1, 1944. Demand deposits, adjusted, of the member banks rose \$942,000,000 further during the month of February and time deposits increased \$194,000,000.

Failures—In the first month of 1945, business failures dropped to 80, the lowest number in any January on record. This was the third consecutive year in which a new low has been established for the month. However, the decline this year was smaller than in the previous two years. The apparent annual number of concerns failing per 10,000 business enterprises, as indicated by DUN's Insolvency Index, which relates the number of failures to the number of increases in business, fell to 4.6 the lowest point on record for any month.

In contrast to the consistent downward trend in number of failures from one January to the next since 1943, liabilities in the first month of the current year were the heaviest of any January in the three-year period and the heaviest of any month in the last year and a half. Among small failures involving liabilities under \$5,000, there was only one failure this January for every three in the same month of 1944, but there were more than twice as many exceptionally large failures with liabilities mounting above \$100,000.

Manufacturing, which accounted for about two-fifths the total failures, was the only trade or industry group in which concerns failing in January this year exceeded those in the same month of 1944. The number of failures was higher than in January a year ago in five lines of industry—mining, textiles, chemicals, iron and steel, transportation equipment—and the liabilities involved were larger in ten of the twelve manufacturing lines.

In trade and commercial service there were four lines in which the number of failures this January exceeded those of the previous January, and ten in which liabilities were larger.

THIS IS WHAT *we* MEAN BY PUBLIC RELATIONS



Every honest public relations problem boils down to a need for replacing misunderstanding with understanding.

Good public relations is being understood by those who should understand—but frequently don't.

So believing, our service starts with studying the problem, and then dovetailing facts with sound methods for getting facts heard and understood.

Associated Counsel

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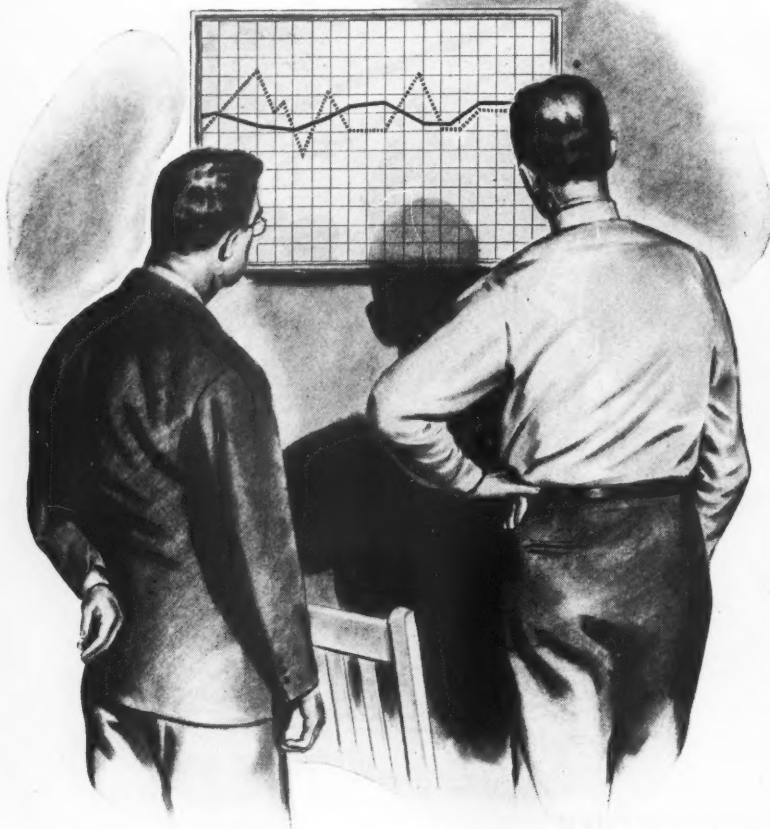
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Stainless steel is our dish, morning, noon, and night. It alone nourishes our business, makes it grow. Because of our complete dependence and concentration upon it we have learned a tremendous amount about it:—how to produce its various grades, how they can be worked into strong, long-lasting, economical and attractive products by such processes as machining, forging, heat-treating, electro-polishing. Like any other material, stainless has its own fabrication requirements. These are special, but not difficult. Our knowledge of them can make stainless steel entirely practical in your plant, to improve old or new products. For the assistance of the specialist in stainless, write to Rustless Iron and Steel Corporation, Baltimore 13, Maryland. Sales offices in principal cities, distributors everywhere.

Producing Stainless Steels Exclusively



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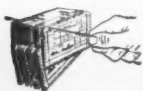


This manufacturer of rubber footwear must make hundreds of different styles for stock—but public preference doesn't always follow stock! So manufacturing schedules must be revised frequently to meet the demand for certain styles, sizes, widths and colors... The company sells nationally, has 80 salesmen, receives about 1,000 orders a day. Production schedules were a perpetual headache—until McBee Keysort was installed.

Now the management gets full daily reports on... orders by style, sizes, widths... production record of items scheduled, cut, finished, and on hand... and timely accurate information

on discounts, cancellations, mail and rush sales, and unfilled orders. Earlier and more pertinent reports permit more timely control in both the sales and production departments, prevent excess stock and deterioration, save thousands of dollars annually.

OUR BUSINESS is making facts available faster. McBee methods and products are custom designed for your specific needs... simple, usable and understandable by office people... proved in thousands of installations. If you suspect your office procedures could be improved, arrange to see a McBee man, soon.



THE McBEE COMPANY SOLE MANUFACTURERS OF KEYSORT

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HERE and THERE

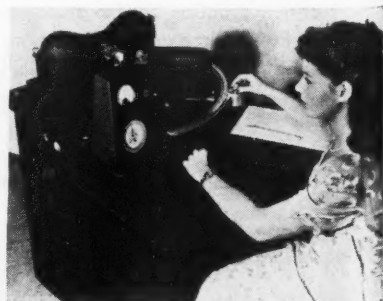
Paint to Boost Morale—Paint, used to "tone" workshops and factories, through scientific application of the various wave lengths of colors can improve morale and boost production, states E. D. Peck, general paint manager, Pittsburgh Plate Glass Company. He recommends individual color study of each plant.

Pittsburgh Plate Glass has developed a color dynamics theory. Departing from conventional gray and buff, it is substituting colors which possess wave lengths characterized as quickly bringing to the workers' eyes critical or operating parts of machines and employing other colors which "drop back" the less important parts but provide the quickest rest for the eyes.

Advocated as the most restful is a green called "Vista." This is a color which a person automatically sees upon looking at a fixed point in a field of white after he has gazed for a minute at a point in a field of red.

Speeding Analysis—Designed for rapid quantitative and qualitative analysis of crystalline and certain uncrystallized substances, the Geiger Counter X-ray Spectrometer, developed by North American Philips Company, New York, is direct reading. It quickly identifies the chemical substances and their state of chemical combination; components present in quantities of approximately 1 per cent, and often less, can be measured. The identification of some unknown substances can be completed in approximately ten minutes.

The device, which may be used by unskilled operators in routine process control as well as in the research labora-



WANTED: YOUR OPINION

on lighting and electronics!



In your estimation, what are the advantages of fluorescent lighting?

☐ Uniformity of light ☐ Low cost of operation
☐ Appearance ☐ Lack of glare
☐ Greater light output

If your plant, office or store uses fluorescent lighting, has this lighting:

Improved work efficiency? ☐ Yes ☐ No
☐ Don't know

Increased sales? ☐ Yes ☐ No
☐ Don't know

Which of these faults in reception would you like to see eliminated first in post-war radios?

☐ Static ☐ Fading
☐ Hearing two stations at once

Has your office, plant or store an inter-communication system? ☐ Yes ☐ No

If not, would you be likely to install one after the war? ☐ Likely ☐ Possibly
☐ Unlikely

Television can be of important use to business. For instance, fashion shows, introductions of new models and salesmen's educational demonstrations may be broadcast visually. Would you be likely to use such a service after the war?

☐ Likely ☐ Possibly ☐ Unlikely

Plant machinery may be operated and controlled in many ways by electronic devices. What services in your plant would you like to have performed by an electronic device?

Sylvania Surveys are helping us to help you in your business!

To better serve American business, Sylvania—through the Sylvania Surveys—is asking questions. What would you like in lighting, radio, television, other electronic developments for your plants, offices, stores?

These Surveys will help us to help you. Answers from many types of business indicate what will be needed to step up production, improve retail selling, smooth office routine. You will want to read the story in our "Report on Lighting and Electronics." Reserve your copy today. It will be mailed to you promptly upon completion.

At the same time, why not let us have *your* opinion on the problems listed here?



Sylvania Surveys will be compiled into a book of facts interesting to business men with an eye to the future. It tells you what will be wanted, for better business procedure, in the field of electronic development. Send for your copy now!

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Beyond the ports of San Francisco and Los Angeles lie what may become the world's largest post-war markets. If you have an eye on these markets . . . or on the rich, concentrated market of California, Bank of America can offer you a unique service.

This bank has branches in more than 300 California cities and towns, and its facilities are available to bankers and other executives interested in business development and reconstruction. Inquiries are invited.

◀ RESOURCES (December 30, 1944) . . . \$4,599,124,132.68 ▶

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tory, offers applications in the paint, chemical, ceramic, rubber, and metallurgical industries.

A small amount of the specimen is powdered, mounted on a flat slide, and inserted in the specimen holder. The specimen intercepts an X-ray beam, deflecting portions of it at various fixed angles. When the positions of these reflections are located on the scale by an electronic indicator, they provide a means of identifying the crystalline form of the material.

Soldiers' Plans—Of the men now in the Army 7 per cent have definite plans for conducting a business of their own following discharge while 5 per cent plan to operate farms, the Army reports after a survey. Interest is mostly in relatively small enterprises, half saying that they will invest \$4,000 or less. A fifth state that they have all of the capital they need; an additional third, that they have half enough.

Of the soldiers having definite plans for business or farming, 42 per cent previously were independent operators and 45 per cent had worked as employees in the same line of work. Besides the 12 per cent with definite plans, another 6 per cent are interested in such projects but are not as certain. Of those who plan their own businesses, six out of ten are interested in retailing or service lines.

Employee Posters—That workers may know about their part in the war effort and about other company activities, the Shell Oil Company every two months prepares and posts interesting, four color, 15 by 20 inches, posters. To



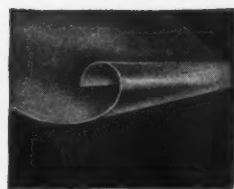


PROTECTIVE OVERCOATS for Spark Plugs ...tailored by Mr. Cellophane

VITAL PARTS for fighting machinery must arrive at the battlefronts absolutely free from corrosion. That's why spark plugs, valves and other ordnance parts are sealed in a special laminated sheet of Sylvania cellophane and fabric after being oil coated. This special wrap is *oil-proof* . . . keeps the

protective oil coating locked in...insuring protection from water and moisture-vapor.

Sylvania cellophane appears on all fighting fronts in many important roles. But the developments Sylvania is making today will mean more uses for cellophane—and better cellophane—in postwar tomorrow.



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IN 9 HUGE ROOMS



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System

The two oil storage rooms illustrated here . . . plus seven others and a long pipe tunnel that could not be photographed . . . represent a major fire hazard in one of America's large war plants. All nine rooms and the pipe tunnel . . . 941,140 cubic feet . . . are guarded by a single engineered Cardox Fire Extinguishing System. 12 tons of liquid Cardox CO₂ provide total flooding of any of these rooms with inert carbon dioxide and CO₂ snow as soon as fire strikes . . . with substantial reserve for new emergencies.

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dioxide to provide enhanced extinguishing performance in protecting large and small hazards.

The hazards in your plant may not be as large as those shown here, but the kind of extinguishing performance that has caused Cardox Systems to be specified for guarding hazards such as these, has a place in your fire protection plans. Cardox engineers offer you practical co-operation. Write for details and Bulletin 1835.

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give the series a related sequence, each poster has a symbol consisting of a set of meshed gears in motion, indicating that research, production, manufacturing, transportation, and marketing—the five principal branches of the company—are “geared for war.”

Store Modernization—All phases of post-war store modernization, from revamping the exterior to laying out the juvenile department, are treated in the 1945 manual published by the National Retail Furniture Association, 666 Lake Shore Drive, Chicago (160 pages, 8 by 11 inches, \$2.50). This handbook is the result of an extensive survey on store design based on the work of industrial research laboratories and on the recommendations of leading commercial architects.

The book is generously illustrated. Of particular interest are photographs of outmoded buildings and suggested post-war designs.

Small stores as well as narrow stores and stores with various other problems are considered in the modernization program. Headings include store location, store fronts, windows, interior designs, department displays, lighting, color, and operating details.

Steam-Heated Bathtub—Alligators are being pampered with a steam-heated bathtub in Detroit this Winter. The “alligators” are LVT amphibian tanks produced by Graham-Paige Motors Corporation while the bathtub is a rectangular concrete testing basin.

The tanks previously were tested in Detroit River several miles away. The new testing basin, situated near the end of the Graham-Paige assembly lines, is expected to hasten deliveries and to eliminate delays caused by ice in the river. Containing 50,000 gallons of water, it is 85 feet long and 18 feet wide. An inclined entrance permits the alligators to crawl in. The water is kept from freezing by steam coils built into the walls.

Ex-Serviceman—A guide for foremen in helping ex-servicemen adjust themselves to plant routine has been published by the training and education department of John A. Roebling's Sons Company, Trenton, N. J. Entitled “You and the Ex-Serviceman,” this 37-page, 4 by 6 inch booklet discusses all phases of foreman-employee relations from the initial meeting and friendly interview to danger signs shown by the ex-soldier which re-

Burroughs Leads in helping when war accounting problems arise

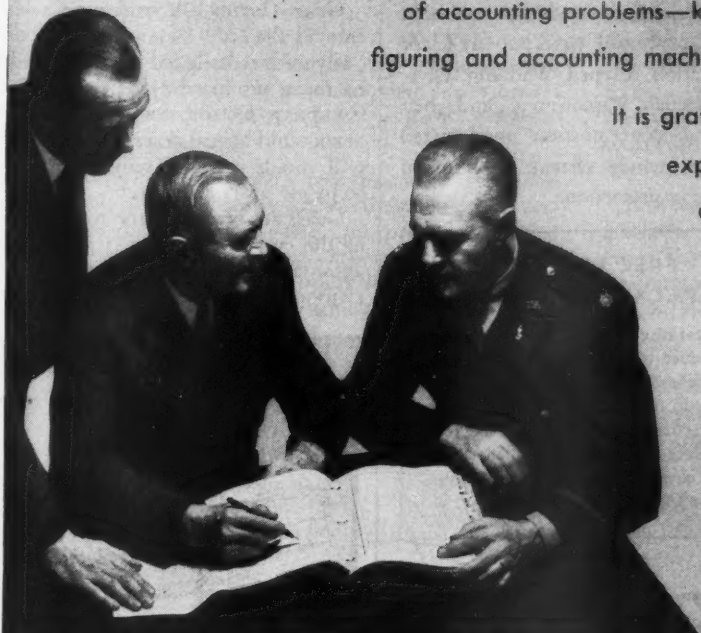
In war industries, camps, depots, bases and government offices,

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It is gratifying to know that Burroughs'
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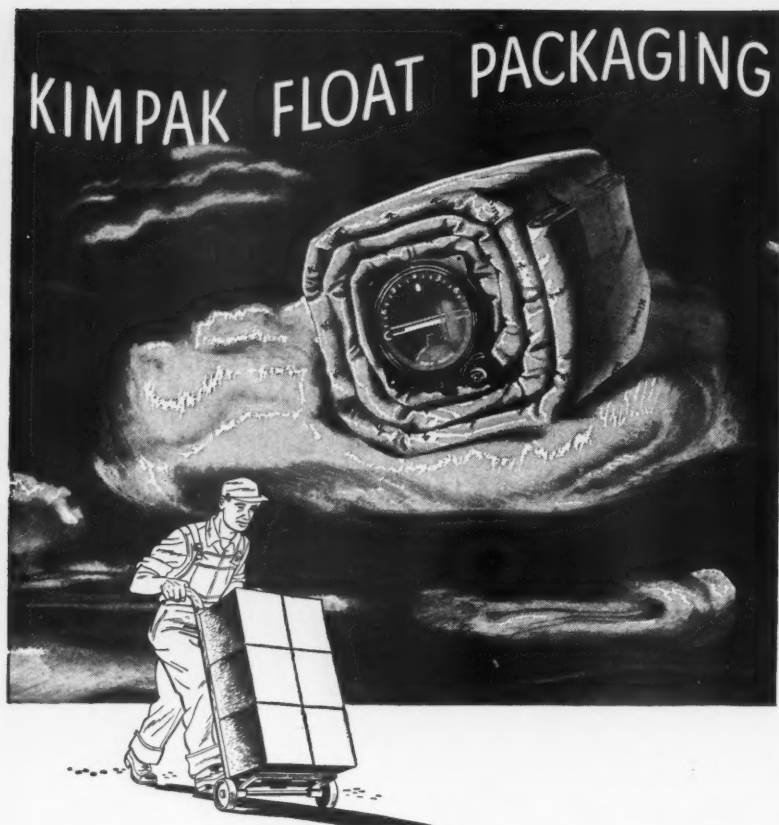
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Increases Shipping Protection . . . Reduces Packing Time

Floated on a soft, downy cushion of KIMPAK*, war materials of every kind are reaching the battle fronts in perfect fighting condition. And after victory, this modernized method of packaging will be a boon to peacetime shippers.

Because KIMPAK is so compact, so flexible, so easy to use, it speeds packaging—saves time and work in the shipping room. Often cuts freight costs by reducing package size and weight. In this particular instance the package size was reduced 80%.

KIMPAK comes in various forms to provide positive protection for anything from refrigerators to jewelry. It will pay you to learn the whole story

about this amazingly resilient cushioning material. For a free illustrated book, mail a post card to Kimberly-Clark Corporation, Creped Wadding Division, Neenah, Wisconsin . . . and when planning your postwar modernized package include KIMPAK for internal packaging-protection.

FREE POSTWAR PACKAGING PLAN

In making plans for your postwar product, the advice of our packaging representatives is yours for the asking. In most cases they will be able to recommend a war-proven method of float packaging with KIMPAK.

Telephone, write or wire today for the KIMPAK representative.

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quire patient understanding and help.

A personal letter from the president of the company, stressing the foreman's responsibility in leadership, accompanied each booklet.

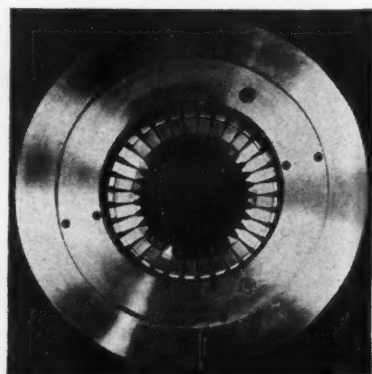
Synthetic Tannin—A complete synthetic replacement for vegetable tannins, known as "Orotan," has been developed by Rohm & Haas Company, Philadelphia, which states that Orotan produces leather fully equal in quality to that produced with the war-scarce natural tans.

The substance, a reddish brown viscous liquid which resembles the conventional liquid tanning extracts, is entirely soluble either in hot or cold water. When used for producing sole leather, Orotan, either alone or blended with vegetable tannin materials, is reported to behave as do the natural tannins.

Upper Berth—The Pullman Company is installing conveniences for those who ride in the upper berth. A passenger may have a clean shirt in the morning, for example, without climbing down. A canvass luggage rack attached to the wall at the foot of the berth provides overnight storage space for a 24-inch suitcase. Another innovation is a small case with two pockets—one for eyeglasses and the other for watches—which is being installed in upper and lower berths.

Gear Cutter—A machine which cuts all the teeth of a gear simultaneously with radially fed form-tool blades has been produced by Michigan Tool Company, Detroit, for the fabrication of spur and helical gears. The machine will rough cut and semi-finish from 60 to 100 gears an hour.

Gears are placed on the work holder of the cutter; chucking is part of the automatic cycle. When the gear is thus clamped the head of the machine, con-



UARCO AUTOGRAPHIC REGISTER



To **MAKE** Business records... that **BREAK** Production records

Today modern record keeping plays a vital role in the breaking of production records. And Uarco Autographic Registers hold a key position in keeping record writing at top efficiency. For these Registers offer greater speed, fewer errors and more convenience in keeping records from buying to billing.

Why? Because with Uarco the forms are loaded in the Register ready for writing. Write the record—turn a crank—and out pop the needed forms... eliminating carbon fuss and other getting-ready-to-write operations. At one writing one person can produce an original plus many legible copies.

A firm writing base... plus ever-fresh carbon

paper always in place in every Uarco Register assures legibility... legibility that means fewer errors, less confusion all along the record route. The forms used in these Registers are designed to fit individual needs... forms come consecutively numbered for easy filing and finding. A duplicate copy of every record written may be automatically filed for protection.

For over 50 years Uarco has been supplying business with Autographic Registers... Registers that are being successfully used in every business department. For complete information, call a Uarco representative today... or write.

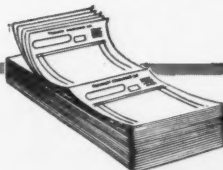
UNITED AUTOGRAPHIC REGISTER COMPANY
Chicago, Cleveland, Oakland • *Offices in All Principal Cities*



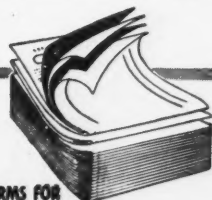
AUTOGRAPHIC REGISTERS



SINGLE SET
FORMS



CONTINUOUS-STRIP FORMS FOR
HANDWRITTEN • TYPEWRITTEN • BUSINESS MACHINE RECORDS



UARCO

BETTER BUSINESS FORMS



Commercial Controls Corporation

of Rochester, New York

is honored to announce that the

Army-Navy Production Award

for

High Achievement in War Production

was presented to the

Men and Women of Plants A and B

on Friday, February 16, 1945

taining the cutter, automatically lowers into cutting position and automatically locks. The work moves up and down. At the beginning of each up-stroke all blades are fed into the work an equal amount, this stroke being adjustable. On the return stroke the blades are retracted slightly to provide clearance for the tools.

Re-absorbing Veterans—A five-point plan for re-absorbing its employees in service has been originated by the Caterpillar Tractor Company.

Ralph Monk, director of industrial relations, enumerates the points as follows: "1. It stems from top management with a sincere desire to do the best possible job of re-absorbing veterans. 2. It is based on common sense, simplicity, and is without fanfare. 3. It recognizes the importance of individual handling throughout the program. 4. It anticipates, recognizes, and solves many problems of the human equation through personal interviews. 5. It recognizes the importance of securing supervisor cooperation, without which no plan can succeed."

Training Management—Courses in management are meeting enthusiastic response throughout the General Electric Company where they have been given to more than 500 people of management level. Members select their own program of study and the classes are largely self instructed. The courses were organized by R. C. Muir, vice-president in charge of engineering and chairman of the company's education committee.

In General Electric each of its many lines of products is managed by a committee composed of the sales manager, the division engineer, and the division factory superintendent. The present courses are designed for executives down through this management committee level and for those who are immediate prospects for management committees. Eventually it is hoped to devise a program which can be given to all employees entering the company from college or who have completed the apprentice course. The program is intended to improve the management technique of those in managerial and supervisory positions and to avoid much of the time and expense of bringing men up to the standard of successful managers.

The first half of the course—six class periods—is devoted to the nature of the business and the second half to problems of management, largely to per-



DESIGNING AN ATTRACTIVE, APPROPRIATE AND PRACTICAL

Employee Benefit Program

Organizations considering the establishment of an employee benefit program can obtain the benefit of Chase experience and research in all stages of planning as well as *practical* assistance in working out technical details.

Our Pension Trust Division has aided hundreds of employers over a period of years in the designing and continued

operation of Plans. We will gladly study *your* case and help you design an attractive, appropriate and practical program.

We suggest a discussion with us at this time because it is presently advantageous to have a plan installed as soon as feasible after full and careful consideration of all factors instead of waiting until near the end of a fiscal year.

Our 92-page summary entitled "Pension, Bonus and Profit-Sharing Plans," covering the fundamentals of formulating and financing employee benefit plans is available. We invite you or your consultant to write for this study and to discuss your particular case with us—without obligation.

THE CHASE NATIONAL BANK
OF THE CITY OF NEW YORK

Pension Trust Division

11 BROAD STREET

Telephone HAnover 2-9800

NEW YORK 15

FOR LETTERHEADS THAT BUILD PRESTIGE INSIST ON *Fox River 100% Rag* ANNIVERSARY BOND



You spend many dollars each year to express your thoughts, ideas, sales arguments in letters. Does the letterhead that carries your messages reflect your personality? Does it sparkle — is it strong — is it brilliant white — crisp as a new ten dollar bill — will it stand rough handling — or is it dull, flimsy, characterless?

Fox River 100% Anniversary Bond is a superior paper — made of strong fibres of cotton cuttings which are welded together into a paper of great strength with a real quality feel. *It is the paper* for permanent records that defy age — for ink signatures that won't smudge — for erasures that will not leave a dirty blurred edge — for clean, sharp type impressions — for legible carbon copies. Insist on Fox River 100% Anniversary Bond. The cost is only $\frac{1}{5}$ ¢ more per letter than 25% rag cotton content paper.

Send For Free Comparison Kit — Visual proof! Comparative samples will show you at a glance why Fox River 100% Anniversary Bond Paper is best for your letterheads whether they are printed, lithographed or engraved.

FOX RIVER PAPER CORPORATION, 402-C S. Appleton St., Appleton, Wis.

Write today for
FREE Comparison Kit.
Visual proof, at a glance,
why only *all-rag* paper
is good enough for
your letterhead!

All-Rag ... ONLY $\frac{1}{5}$ Cent ... MORE PER LETTER

ANNIVERSARY BOND

A Fox River PAPER

sonnel problems. Since the class chooses its own case problems, there is opportunity for members to bring in actual problems. The problems are acted out.

The classes are limited to 12 members, each of whom serves as chairman of one meeting. As far as possible each class includes representatives from the engineering, sales, and accounting divisions and from other functional departments.

Date Calculator—Counting of days in scheduling work is eliminated through use of a slide rule designed by George Wollinger, Production Planning and Scheduling Department, Glenn L. Martin Company, Baltimore. The rule has two fixed scales—one showing calendar and the other working days—and a double movable scale, calibrated in numerical graduations.

In determining, for example, how many days before final test it will be necessary to start the keelson of an airplane, the scales for the number of working days required to complete the work and for the date on which work is due are set. It then takes but a few seconds to read off the date on which work must be started.

Fog-Free Goggle—A self-cleansing goggle has been designed by the Polaroid Corporation to prevent clouding up or fog regardless of how much a worker perspires. This is being distributed by the Welsh Manufacturing Company, Providence, R. I.

The goggle, fitted with a nose piece, is powered by lung action. Normal breathing produces a change of air in front of the wearer's eyes about once every second. This action is said to remove moisture from within the goggle before there is sufficient to condense on the plastic lens.

Inhalation draws air through the in-



M A S T E R S O F P R E C I S I O N



It must be right

The non-ferrous metals made in Western mills are held as rigidly to the specifications as an apothecary's prescription. At Western, we take specifications literally. There can be no deviation, any more than a druggist can deviate from his prescribed number of grams.

That degree of exactitude is common practice here in producing brass and other copper base alloys. If your special requirements call for extremely close tolerances and exacting tempers or fin-

ishes, the metal will be made that way—*custom* made to exactly suit the part it is to play in your production plans.

Western mills at East Alton, Ill., and New Haven, Conn., are supplying copper and related alloys in stamped parts, sheet, strip and long coils—highest quality metals that meet every requirement. Much of our large capacity is devoted to war needs but it is possible we can serve you and will welcome the opportunity. Western Brass Mills, East Alton, Ill., Division of Olin Industries, Inc.



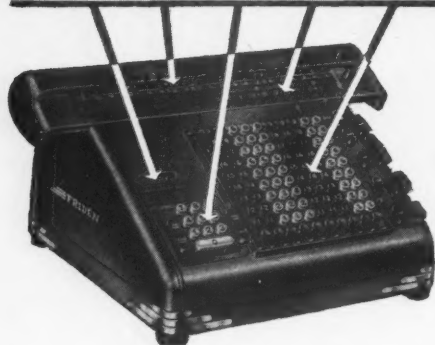
WESTERN BRASS MILLS

BRASS • BRONZE • PHOSPHOR BRONZE • NICKEL SILVER • COPPER



FRIDEN

Automatic Dial and Keyboard Clearance



Assures

- PERFECT ACCURACY
- INCREASED FIGURE OUTPUT
- MINIMUM OPERATOR EFFORT

HERE'S PROOF IN THE WORDS OF A FRIDEN USER...

"I actually work thousands of problems without ever having to clear the dials or the keyboards. For on my new Friden Calculator they are *Cleared Automatically*, without effort or even thought on my part. There is absolutely no chance for uncleared dials or keyboards from previous problems to cause errors.

I can tell by the increased amount of work I turn out and by its perfect accuracy...as well as by how much better I feel at the end of the day...this one Friden Feature is worth its weight in gold to me."

Telephone or write your local Friden Representative or the Home Office in San Leandro, California for complete information regarding these Calculators which are available, when applications for delivery have been approved by the War Production Board.

FRIDEN Mechanical and Instructional Service is available in approximately 250 Company controlled Sales Agencies throughout the United States and Canada.

FRIDEN Calculating Machine Co., Inc.

HOME OFFICE AND PLANT • SAN LEANDRO, CALIFORNIA, U. S. A. • SALES AND SERVICE THROUGHOUT THE WORLD

take ports of the goggle. This is carried across the inside of the lens and through an inlet valve into the nose. Exhalation closes the inlet valve and opens the outlet valve in the base of the nose piece.

Protecting Fittings—New internal and external safeguards for threaded and machined parts and fittings manufactured by Precision Paper Tube Company, Chicago, are made of spiral-wound fiber, kraft paper, or cellulose acetate under heat and compression. They are designed to protect fittings, exposed openings and ends, and tubing from moisture, rust, dirt, grit, dust, or damage in packaging, storage, or shipping.

The protectors are shaped to the article to be safeguarded—cylindrical, square, rectangular or tapered, crimped, flared, or perforated. They have tolerances as close as three-thousandths of an inch. The manufacturer's name and the name and number of the part can be printed on the protector.

Pooling Suggestions—A plan for pooling employee suggestions which may be adopted by any industry as a whole through its trade association is in effect in the Canadian aircraft industry. All suggestions are published in numbered sequence by the Aircraft Industry Relations Committee, 330 Bay Street, Toronto. Any industry may make use of them, receiving complete details upon application.

The committee, established early in the war to correlate personnel problems of the entire Canadian aircraft industry, publishes for members of the industry a monthly "Suggestion Review." The suggestions are forwarded by the various labor-management committees.

Merchandising New Products—To aid small manufacturers in meeting the problems of distribution prior to the actual introduction of new products, the Bureau of Foreign and Domestic Commerce, U. S. Department of Commerce, has issued a "Check List for the Production of New Products." This is available from the Bureau, Washington 25, D. C., or from any of the 26 field offices.

Many excellent consumer products have died in factories, the booklet points out, because manufacturers had not planned in advance how to sell successfully as well as how to make the product. The check list is offered as a working tool for the manufacturer who



Fights Corrosion...SO Water Fog can Fight Fire

Fog outside a ship is dangerous. Fog on or below decks—Water Fog—can save it from the worst peril of the sea—fire!

Water fog is man-made... sea water forced through a nozzle with screen holes so fine they make a vapor-blanket that smothers even raging oil and gasoline flames. And, equally important, water fog does not capsize ships with needless tons of water.

The screen for the nozzle that makes water fog must stand off the corrosive bite of salt water, yet stand up to terrific pressure despite its thin construction. Therefore, it is made of Monel which contains a high percentage of Nickel—the tough metal which is used in alloys that fight rust and corrosion.

Already Nickel has helped water fog snatch blazing warships, carriers, troop transports, and even tankers, from Davy Jones' relentless grip—sometimes after burning for days!

*...just as it Fights Corrosion
in your Home Fire Extinguisher*

If fire strikes in your home or garage, your fire extinguisher must be ready—not clogged or frozen by rust or corrosion.

That's why many types have valve seats, discs and springs made of Nickel alloys—metals that stand up in "standby" service as well as in every-day use. In this, as in countless other ways, versatile Nickel is your "unseen friend"—part of your daily life, like the starch in your shirts or the salt in your food.

The International Nickel Company, Inc.
New York 5, N. Y.

International Nickel—world's largest miners, smelters and refiners of Nickel and Platinum metals... the producers of INCO Nickel alloys, including MONEL and INCONEL.

**BUY AND HOLD
WAR BONDS**

Picher X-Ray Photo

● Armor plate must be flawless or our soldiers will be endangered. Engineers must *know* the metal is perfect . . . so an X-Ray picture gives proof in one look.

Quick proof also is important in your business figuring. You must *know* the figures are right . . . and the Printing Calculator's tape proves all factors in one look.

Notice the tape as the machine prorates the electric light expense of \$112.75 for three departments. Floor spaces are 1362, 1135, and 1223 sq. ft. with \$0.030309 as the cost per sq. ft. The machine multiplies the cost by the square feet in each department, and finds and proves the prorated expense of \$41.28, \$34.40, and \$37.07.

Take a look . . . the printed tape is your permanent proof. You *know* you're right the first time.

ONLY the all-purpose Printing Calculator *prints* as it multiplies, divides, adds and subtracts. It saves time and avoids mistakes because *there's no copying from dials, no need for extra proof.*

Inexperienced clerks figure on this machine easily from the very first day because of its *simplified operation*. The 10-numeral-key keyboard requires no specialized training and leads naturally to touch operation.

In every kind of figure work—statistics, billing, payrolls, etc.—the Printing Calculator aids business to more accurate fast figuring. Let it aid YOU.

Phone the nearest Remington Rand office for a demonstration *Today*, or write to us at Buffalo 5, N. Y., for the free booklet TOPS.

The Printing Calculator is available on WPB approval, to help conserve manpower, expedite warwork, maintain necessary civilian economy. Talk it over with our representative.

Remington Rand

AUTOMATIC PRINTING CALCULATOR

The only **PRINTING** calculator with automatic division

1 3 0 3 0 9 0 0 0 0 v v
1 3 3 0 3 1 0 0 0 0 v v
6 3 0 3 1 0 0 0 0 0 v v
2 3 0 3 0 9 v v
4 1 2 8 0 8 5 5 .
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1 3 0 3 0 9 0 0 0 0 v v
2 3 0 3 0 9 0 0 0 v v
3 3 0 3 0 9 0 v v
3 3 0 3 0 9 v v
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3 7 0 7
1 1 2 7 5 .

wants to insure that he has thought his merchandising and selling problems through before he launches a new product.

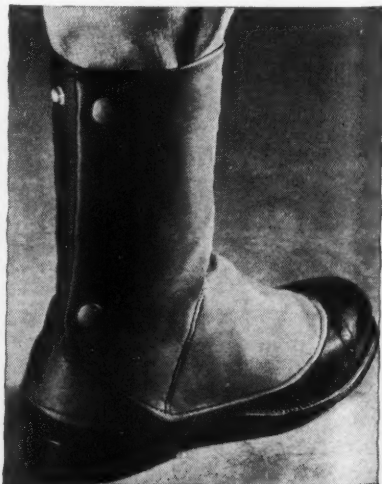
A work sheet rather than a textbook, the check list is divided into six parts: (1) the users of the product; (2) channels of distribution; (3) competition; (4) manufacturer's price policy; (5) selling and promotion; and (6) legal and related problems.

Stronger Tire Cords—A new principal in rayon tire construction consisting of using stronger but fewer plies in synthetic rubber truck tire production, is announced by Dr. Sidney M. Cadwell, director of tire development, United States Rubber Company.

The construction, known as the "2,200 denier" rayon type, is said to greatly reduce serious blow-outs. This has twice the number of filaments twisted together as the 1,100 denier which was the type previously used in conventional tires and which the 2,200 denier now replaces in certain tire sizes. The stronger individual rayon cords reduce rupture spread, making it possible to repair injured tires by recapping.

The new method will materially aid in increasing tire production because fewer operations are involved and materials and component parts are reduced. A stronger eight-ply tire thus is produced in place of the conventional ten-ply and similarly a stronger ten-ply in place of the twelve.

Ankle and Foot Protection—A spat devised by the American Optical Company, Southbridge, Mass., provides ankle and foot protection against acids, alkalis, oils, solvents, and greases. Made from a coated fabric, it is said to be extremely flexible and to give the



*All we ask,
is that you keep
in mind*



POLLAK MANUFACTURING COMPANY

Arlington, New Jersey

**DEVELOPING • DESIGNING • MACHINE WORK • SPINNING
GAS AND RESISTANCE WELDING • STAMPING • ELECTRICAL WORK**

Said the Bookkeeper to the Manager:

What's this new paper we're using? It's a pleasure to work with.

Said the Manager to the Bookkeeper:

It should be. We chose it after weeks of testing various kinds of paper for all our records. It's Parsons Mechano Form.



THIS firm has several different machines . . . and needs both sheets and cards that take various machine inks as well as hand-posting writing inks. Entries must be clean cut and legible and stay that way. The system calls for matching colors in both paper and cards, and quite a variety of colors.

If your records must stand plenty of use and abuse, take erasing, even with chemical erasers, without changing color, and stand erect

in files without getting dog-eared, Parsons Mechano Form is what you need. Only in a cotton fiber paper can you get real wearing and lasting quality.

So when you need bookkeeping and record papers that will do everything the job requires, specify **PARSONS MECHANO FORM**, an economical 50% cotton fiber paper, made by the mill that specializes in paper engineered to do the job *right*.*



PARSONS PAPER COMPANY • HOLYOKE, MASSACHUSETTS

*For example: One manufacturer of bookkeeping machines uses ink that dries very quickly. It makes a clean, sharp impression . . . but after an hour it kept on spreading along the fibers in the paper. Working with this machine manufacturer, we evolved a paper formula which solved the problem . . . and will take any ink without smudge or spreading.

same protection as rubber although lighter in weight.

Ease of putting on, adjusting, and removing is provided by three snap fasteners at the top and two at the bottom. Large flare insures over-all protection of the instep. Pants may be worn over the spat or tucked inside.

Award of Merit—The Electric Boat Company, Groton, Conn., recently sent an award of merit to all of its suppliers and cooperating Government agencies to express its appreciation for their part in the task of building submarines for the United States Navy. The response was a shower of grateful and astonished letters. Several companies wrote that the certificate was being displayed in their plants as a morale builder.

Success in Retailing—What chance does the returning soldier have to succeed in retailing? This question is answered by the Chamber of Commerce of the United States, Washington, D. C., in an 18-page 4 by 8½ inch booklet entitled "What It Takes to Be a Retailer."

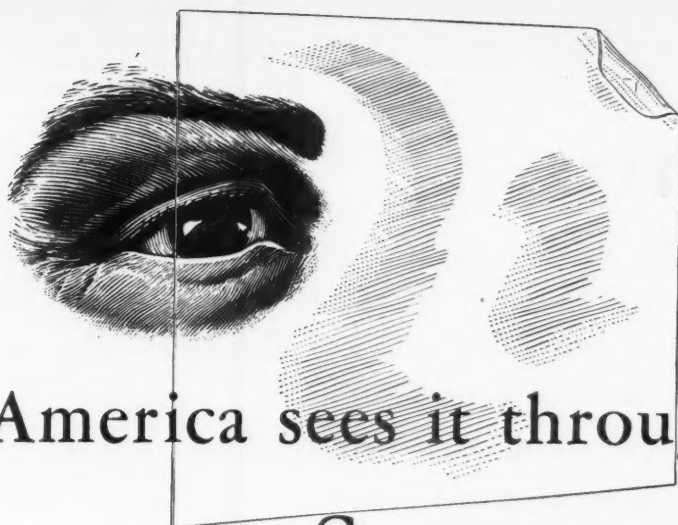
The booklet, which concisely analyzes all the major factors for success, was inspired by the many letters which the Chamber of Commerce had received from men and women in the armed forces seeking information as to retailing opportunities.

In opening the brochure presents as an alternative the numerous opportunities for advancement open to employees of department stores, chains, and in service industries. On the other hand the high percentage of retail failures and the thousands of other cases where the proprietor barely ekes out a living are cited.

In discussing what it takes to succeed such elements are considered as sufficient capital, "know-how" of the business, suitable location and building, purchase of stock and fixtures, keeping of records, management technique, and business ethics.

Suggestions—Employee suggestions at the Pratt & Whitney Aircraft Division of United Aircraft Corporation, East Hartford, Conn., have been stimulated by the publication of a 20-page 5 by 7 inch booklet entitled "What to Do with Your Head." Humorous two-color drawings illustrate each point.

Jay S. Wooters, supervisor, Suggestion Committee Investigators, reports that the booklet apparently contained enough chuckles to put it over as work-



America sees it through —SYNTHETICS

THE RARITY of true transparencies in nature and the growing need for such materials in practical form for industry have long challenged science.

Synthetics provided the answer in transparent plastics. Crystal clear, yet tough and flexible, plastics have revolutionized countless industries and brought benefits to millions of people.

The Lumarith® family of Celanese® plastics is an ideal illustration. Various types of this tough, durable synthetic have been created in a wide range of formulations to meet specific needs with precision. Lumarith plastics can be brilliantly clear or carry a full range of handsome, all-through colors. Virtually any combination of properties can be had—from high impact strength, to waterproofness, to electrical characteristics.

These transparent plastics are serving in many vital war roles—from cockpit covers in military planes to the tough weather-proof covers of military maps. They form the unbreakable lenses used in military gas masks.

Millions of see-through containers for both civilian and military products depend on plastics for protection against water, fungi, mold and mechanical damage.

In thousands of factories, non-shattering plastic machine guards and goggles protect life and limb and eye-sight, while promoting efficiency through visibility.

Actually, clear plastics have limitless applications, and here again synthetics have demonstrated the inherent ability to correct nature's deficiencies by means of materials exactly suited to modern needs.

Yet plastics are only one field of Celanese research which also embraces synthetic textiles and chemicals. Celanese yarns are famous for their beauty, utility and economy. An example of how synthetics can develop and accentuate special properties in a textile is the new Celanese yarn, Fortisan®. It is the world's strongest textile yarn—yet astonishingly light. Virtually all Fortisan now goes for flare parachutes, but there are end-

less postwar civilian opportunities for this unique union of sheer lightness and high tensile strength.

Lindol®, a Celanese chemical, is becoming increasingly known to the industrial chemist as a product of many potentialities. Here are just two examples: As a lubricant additive, it increases the film strength of modern aviation motor oils many times and sustains greatly prolonged periods of engine operation. As a non-flammable sealing fluid, it is used in hydraulic presses where it protects workers against the hazards of fire and explosion.

What are your goals in advanced products? Perhaps you may find the answers, as so many others have, in synthetics—in Celanese continuous research. If your war work, or future plans, can benefit from a research policy which insists that materials be fitted to needs, not needs to materials, Celanese Technical Service—in textiles, plastics and chemicals—is at your disposal.

Celanese*

TEXTILES

PLASTICS

CHEMICALS

"GREAT MOMENTS IN MUSIC" PRESENTED BY CELANESE

... EVERY WEDNESDAY EVENING COLUMBIA NETWORK COAST TO COAST

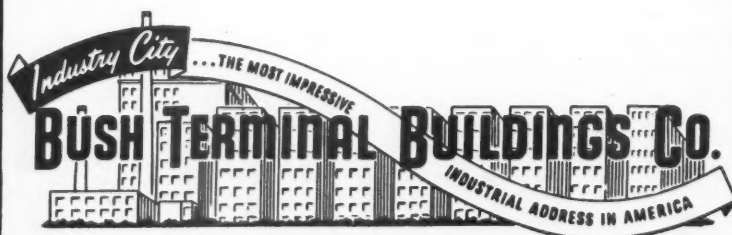
*Reg. U. S. Pat. Off.
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CELANESE CORPORATION OF AMERICA • 180 MADISON AVENUE • NEW YORK 16, N. Y.

FACILITIES

Rail transportation, via all Trunk Lines, right at your door, docks only a step away... light, heat and power (steam & electric)... sixteen modern concrete and steel industrial buildings, with about 6,000,000 square feet of ideal floor space divided as tenants require. Exceptional elevator service... What better or more economical facilities can you wish for your post-war operations?

Fully rented now, but consult your broker, or write us, now, to get priority rating on our "future" list.



E. T. Bedford 2nd, President

Manhattan Offices: 100 Broad Street

Telephone Whitehall 4-4670

ers are submitting more suggestions of greater value. The empty-minded worker, "Joe you know who uses his head to keep his ears from rubbing together," is contrasted with the employee who uses "horse sense," displaying a thorough knowledge of the job plus sufficient creative imagination to produce an idea of value.

Readers are urged to think of their jobs in the following terms: (1) improvement and simplification of production methods; (2) improvement in design of tools, jigs, and fixtures; (3) improvement in quality of production; (4) reduction of scrap; (5) improvement in handling and storage of materials; (6) conservation of tools and shop supplies; and (7) elimination of accident and fire hazards. What happens to suggestions is carefully explained.

Withholding Tax Chart—To meet the requirements of the revised withholding tax law based on a simplified method of classifying employees, the Delbridge Simplified Withholding Tax Chart is published in four editions, covering weekly, bi-weekly, semi-monthly, and monthly payrolls.

Published by Delbridge Calculating Systems, Inc., St. Louis, the wage bracket withholding tables show the deductions instantly. The publishers state that the new wage bracket tables have been so improved that most of the objections to the old bracket method have been eliminated. The new wage brackets are more finely graduated than before.

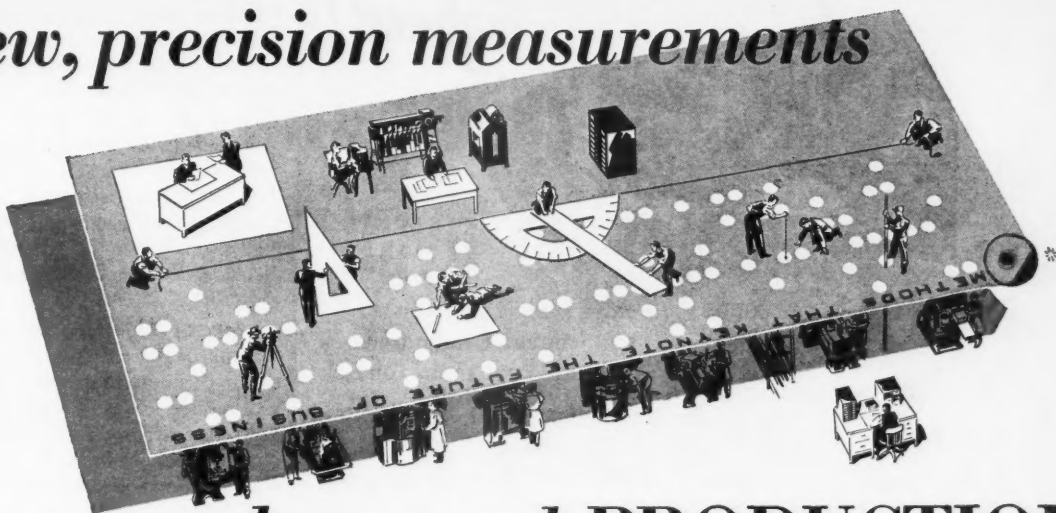
Slashes Shipping Costs—An estimated savings of more than \$3,000,000 a year through new methods of packing, baling, and shipping goods has been effected by the Army Quartermaster Corps at one depot alone, Philadelphia, which handles most of the Army's clothing procurements.

In shipping clothing from the manufacturers to the depot, two paper bags, weighing a pound apiece, now replace a ten-pound carton, saving an estimated 20,000 tons of fibreboard a year.

In place of burlap, formerly imported from the Far East for baling, osnaburg, a course woven cotton material is used. A method has been perfected which effects a savings of five-sixths of a yard of osnaburg per bale and which has been a major factor in increasing the output per baling machine from 60 to 160 bales a day.

The cloth, which has been sewed into a continuous spiral tube similar to an endless stocking, is cut to the de-

New, precision measurements



that speed PRODUCTION

Three and one-half-fold increase in production is what Control Instrument Company achieved when Remington Rand Punched-Card Accounting helped reduce operational losses.

ONLY through the mass compilation of detail facts can many forms of machine and manpower losses be accurately measured and corrected. Remington Rand Punched-Card Accounting and Tabulating Machines make these facts available in greater detail, easier, faster, and with greater assurance of accuracy than by any other method. Here is what George W. Price, Vice-President, Control Instrument Co., Brooklyn, N. Y., has to say about their achievement:

"We make fire control instruments for the navy and intercommunicating telephones for industry. The huge naval expansion program intensified our efforts to increase production, for which we have received four Army-Navy "E" awards.

"With only twice the number of workers we are producing over 7 times the volume. This increase is due in no small measure to our successful use of Remington Rand

Punched-Card Accounting in providing production control data whereby we could increase output by reducing waste of manpower and machine time.

"Three important reports are produced punctually every morning under a schedule that makes speed paramount:

1. Machine Shop Piece-report shows the number and kind of pieces produced during the previous day and night shifts. This report, completed by 9:15 each morning, goes to the Schedule, Methods, and Expediting Departments, and to the Vice-President in charge of production.
2. Daily Machine Report, distributed 45 minutes later, goes to foreman of the Machine Shop for checking previous shift performance and for assigning work and machine loading; to the Scheduling Department for comparison with and revision of planned performance; and to the Expediting Department for following up urgent jobs.

3. Lost-Time Report, ready at same time as the second report, shows personnel lost-time data and goes to department foremen and Personnel Department.

"The obvious results of having complete and accurate production reports on executives' desks each morning have been that we are able to schedule machines and jobs more efficiently; methods-men can check actual with estimated output of men and machines; expeditors know more closely how important jobs are progressing; idle machine time is lowered; lost hours by employees are spotlighted and reduced. All of these results increase production."

Certified Report #4311-3C, covering details of how Control Instrument Co., accomplished this great production increase, is available to interested executives by writing to our branch office nearest you, or direct to Remington Rand Inc., Tabulating Machines Division, New York 10, N. Y.

• KWIK-FAX •

Only REMINGTON RAND Punches can "hold" data for automatic repeat punching.

Data common to more than one tabulating card may be "held" in the punch and automatically repeat-punched, instantaneously and without the need for "pattern" cards, into as many cards as desired. This eliminates time-wasting individual punching operations and increases productivity many-fold.

Remington Rand

PUNCHED-CARD ACCOUNTING

* The HOLE MARK of a System
... the Symbol of Accuracy



Write for: "The HOLE-STORY of Punched-Card Accounting"—
the book that tells a vital story to business. It's FREE!

BUY BONDS—Buy Victory and Peace




why so low
highness?
your

"ZOUNDS! Ye Royal Scribe hasn't shown up... and there's nobody to take down Ye Royal Proclamations!"

"As Ye Royal Magician, I can fix that, Sire. Abracadabra..."

Alacazam... Dictaphone Dictation! Now just talk to the machine... everything goes on record and will be all ready to transcribe on Ye Scribe's arrival!"

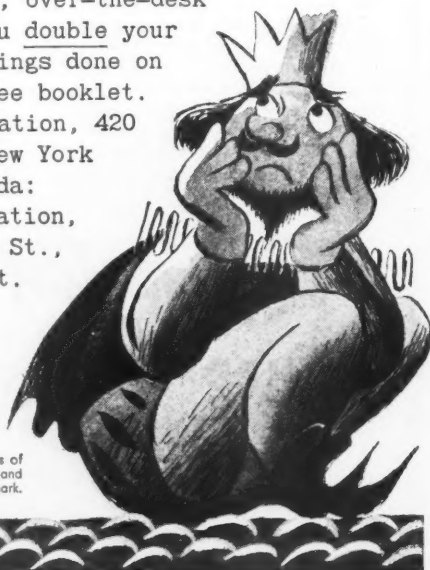
"I get you, Merlin... and it means also that Ye Scribe will have more time to file Ye Royal Decrees and fend off interruptions from my royal person. Hereafter, Merl', wasteful Two-Person Dictation is banished from our palace!"

... and banished from your office, too, you'll say when you discover for yourself the time-saving, delay-preventing convenience of Dictaphone dictating equipment... either the familiar Acoustic type, with speaking tube  or the new Electronic models with desk microphone  or hand microphone . Using Dictaphone Electronic Dictation, you can record both ends of telephone calls and under proper conditions, over-the-desk conversations. You double your ability to get things done on time. Send for free booklet. Dictaphone Corporation, 420 Lexington Ave., New York 17, N. Y. In Canada: Dictaphone Corporation, Ltd., 86 Richmond St., W., Toronto 2, Ont.

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MACHINES



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sired length and sewed at one end. The bale, after being compressed and strapped in the baling machine, is slipped into the tube and the tube opening sealed with a wire tie.

Previously, it was the practice to place a layer of osnaburg below and above the garments to be baled, and then, after the garments were compressed to bale size, the pieces of cloth were brought together and sewed completely around the bale by hand.

Leave of Absence—Servicemen returning to the employ of the International Business Machines Corporation will receive leaves of absence with full IBM pay after their honorable discharge from the service. Those who were stationed outside the United States will get two weeks and those within the country, one week. Such benefits were outlined in letters sent to all employees in the armed forces.

A disabled veteran who cannot return to work upon discharge from military service will immediately receive his full regular pay in accordance with the provisions of the IBM health and accident plan. Under this plan disabled employees will get their regular pay for a period up to six months, less any benefits paid by the Federal Government. Individual consideration will be given to cases continuing longer.

For wholly disabled veterans the company will carry the premium on the former's National Service Life Insurance in an amount equal to the company group insurance to which they were entitled before entering service.

Little Plants Within Large—Considerable reduction in manufacturing costs are being achieved in plants of four client companies through mass production "in reverse," says McKinsey & Company, management consultants. The underlying principle is to set up several complete little plants within the large single plant.

Instead of several large specialized departments producing large quantities of individual parts or pieces of the final product, the production scheme calls for several manufacturing units. Each of these units starts with the raw material, completes all fabrication, and assembles the final product. In one client plant eight individual units have been set up.

Cost savings are ascribed to several factors. These include a marked reduction in the time consumed in manufacturing; improvement in supervision and control; increased operating tem-

Let's give sober thought to the tires we have on our cars today

This is straight talk about your car and your tires!

You need your car and your nation needs it... *more than ever!*

Three years ago we sent you a message through the newspapers and magazines of this country with this headline, "Supposing we all laid up our cars for the duration of the war".

The whole nation responded with the overwhelming answer that such a national catastrophe must not happen. Today, with our Armies moving ahead on every battle front, it is much more important than ever before to keep our war cars rolling.

You need every mile in your tires and

your nation needs them... *more than ever!*

No one can promise when you'll get new tires. You know why. They are needed in Europe and in the Pacific. And you wouldn't want it any other way.

Let's give sober thought to the tires we have on our cars today.

Remember the Tire Conservation Program that this company gave the car owners of America in 1942.

Tire Conservation is more important than ever to you today.

If every car owner cuts his mileage in half—he doubles the life of his tires.

Make precious every tire mile.

Guard your tires to every last mile of their tire life.

HERE'S HOW YOU CAN KEEP YOUR CAR ROLLING!

1. Drive to your nearest tire dealer today and have him check over each of your tires including the spare for cuts, bruises or other signs of failure.

2. Ask him to give you an estimate on how much mileage you can reasonably expect from the present treads and whether it will be possible to recap when the tread wears smooth.

3. Do some actual pencil and paper figuring to see how long that mileage

will last you. No one knows when the war will end, but if no new tires could be purchased, do you honestly think your present tires will pull you through at your present driving rate?

4. Cut down your driving to absolute essentials. Apply the same rule to anyone else who drives your car. When your car is in the garage you save rubber and gasoline. Our fighting men need both.

5. Keep speeds down—under 35

miles an hour and avoid curbs, holes and ruts.

6. Keep air pressure up to 32 pounds all around—including the spare. Check air pressure every week whether you use the car or not.

7. Recap in time—see your tire dealer as soon as your tires wear smooth—don't wait till the fabric shows through.

8. Always remember—your car is a war car now!

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po; elimination of long hauls of material inside the plant; and reduction of in-process inventory. In one plant direct labor costs were reduced 20 per cent. The spirit of competition aroused in small-plant groups and the feeling on the part of each worker of individual responsibility for the complete product tend to bring about an improvement in morale.

Pre-Termination Planning—Five steps for contractors and subcontractors to take in pre-termination planning are suggested by the War Department. The Department reported that often delay in contract settlement was due to the contractor's delay in submitting his claim.

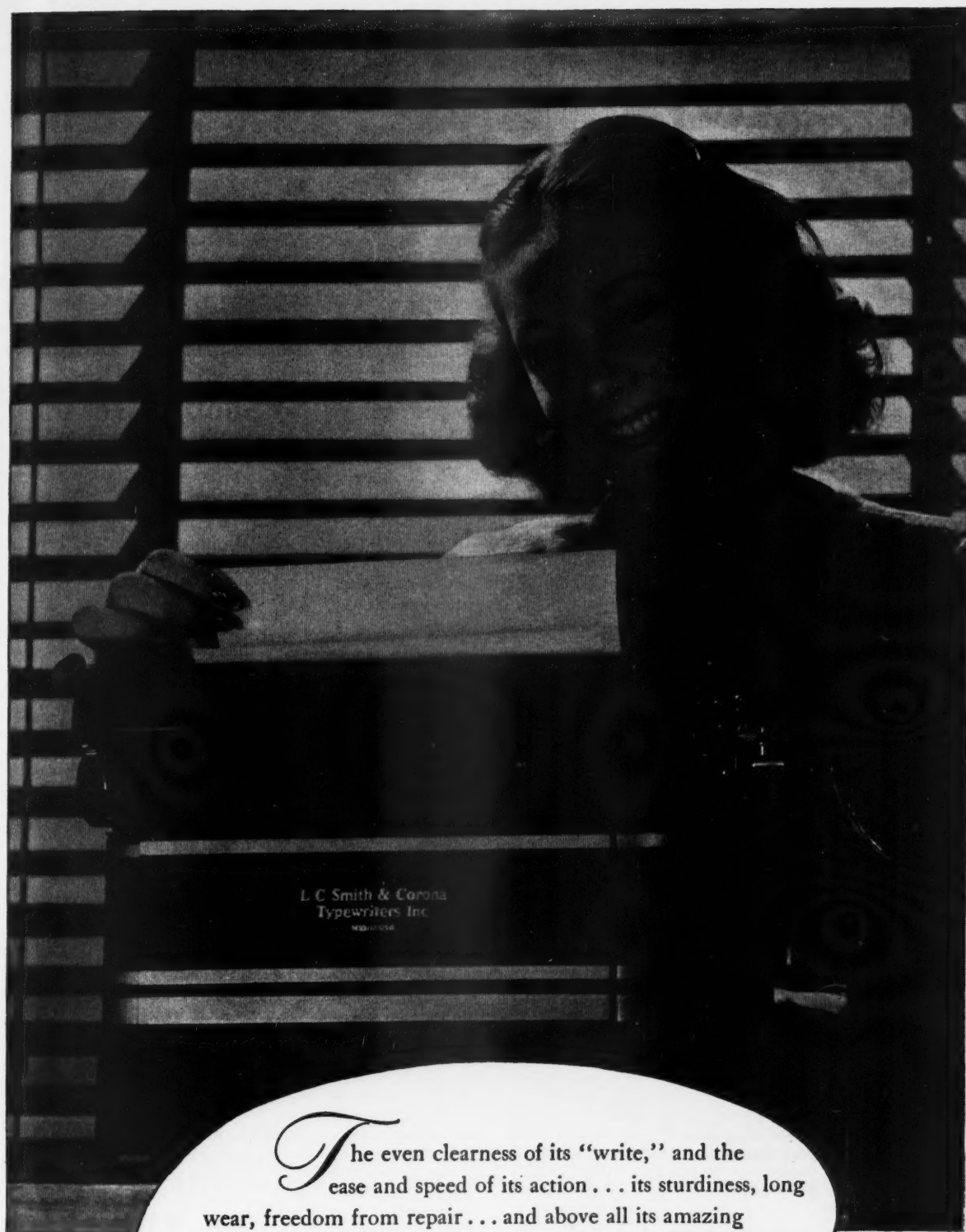
In pre-termination planning the contractor is advised: (1) avail himself of the various publications explaining termination procedure (such as the *Contractor's Guide*, issued by the War Department) which are available from the local contracting officer; (2) delegate a member of his organization to check Government regulations on contract termination; (3) attend awareness meetings such as those conducted by the Chambers of Commerce, the Smaller War Plants Corporation, and industrial groups; (4) keep in close touch with his local contracting officer, especially on existing individual problems; and (5) set up a termination group within his company.

Hole Punch—A way to punch holes in the sides of work has been devised by the Wales-Strippit Corporation, North Tonawanda, N. Y. The Wales horizontal Type "H" hole punching units are made to punch holes in flanges, angles, container sides, and similar shaped and formed work. The punch moves back and forth horizontally instead of up and down, enabling it to punch holes in the sides of work.

As each unit is independent and self-contained, the same group of units may be reused on press brake rails and on templates in stamping presses to punch straight line patterns. Punch, die, guide, and stripper spring are held as an independent, self-contained unit by the holder.

G.I. Services—The Worcester, Mass., city government, in cooperation with local manufacturers, is offering a variety of services to the returning veteran through its Veterans' Service Department.

Such aid includes: (1) free photostats, with the negatives kept on file for him,



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NEW YORK

The even clearness of its "write," and the ease and speed of its action . . . its sturdiness, long wear, freedom from repair . . . and above all its amazing record of service during these high-pressure war years . . . give the Smith-Corona Typewriter a special place in the affections of its users.

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Plant

HAVE YOU OVERLOOKED

- ☒ . . . profit that may be gained by converting scrap ends and by-products of your business into some saleable products?
- ☒ . . . diversifying your product and maybe adding a line that will sell in your slack season when your regular product has its seasonal lag in sales?
- ☒ . . . scouring the field for new products to take care of the extra facilities you have put in for war work? This country will have a real manpower surplus which we must take up when this war is over.
- ☒ . . . putting in better controls so that you may more effectively control your business? A more up-to-date plan of production control may allow you to operate with a lower inventory.
- ☒ . . . investigating and having someone make a research to assure you using the very best advantages that may be gained from the proper cutting oils?
- ☒ . . . checking up on your suggestion system for your men? Some plants have been found to have suggestion boxes with suggestions in them for three months.
- ☒ . . . getting the best trade papers for your key men, so that they may keep fresh?
- ☒ . . . the value of a close contact with your supervision?

Better think it over! And if you wish more information about us, we'll be glad to send you our new free booklet, "In The Competitive Battles Just Ahead."

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of the veteran's discharge papers, citations, pension forms, insurance records, and other Government documents; (2) expert guidance on the intricacies of G.I. law and consultation on insurance, pension problems, and so forth; (3) medical and dental examination and care, including thorough physical examination at the request of employers; (4) vocational guidance and placement; (5) legal aid; and (6) emergency relief, when necessary.

The returning soldier finds himself among people who are mostly veterans and who treat him as an individual, know his problems, and talk his language. The project has such facilities of its own as medical and dental clinics, the photostat room, and offices for the information center, for consultation on legal questions and re-employment and vocational guidance.

Accident Report—A hospital slip on which plant supervisors check off the source and cause of accidents, thus expediting and clarifying accident reports, has been a factor in nearly halving the number of such occurrences at the Electric Boat Company, Groton, Conn.

The new hospital slip obviates the difficulty which supervisors formerly experienced in writing the cause of the accident either because they could not "put their finger" on the cause or they could not put their thoughts into writing. The back of the slip, which is herein reproduced, is divided into two columns, one listing accident sources and the other causes. The supervisor merely has to check the appropriate box in each column and sign his name.

LEADING MAN MUST CHECK ITEMS IN EACH COLUMN AND THEREAFTER THE PART OF EACH ITEM THAT APPLIES TO THIS ACCIDENT AND RETURN TO SAFETY DEPT. DAILY.

ACCIDENT SOURCES

1. ☐ Dust from wind
2. ☐ Hand tools—
type _____
3. ☐ Power tools—
type _____
4. ☐ Machine—
type _____
5. ☐ Vehicle—
type _____
6. ☐ Welding, Burning, Soldering, Braising
7. ☐ Handling material, Metal, Wood
8. ☐ Picking material, Metal, Wood
9. ☐ Walking, Bending, Twisting, Climbing
10. ☐ Hoisting equipment, Cranes, Chain falls, Hand lines
11. ☐ Working surfaces, Road, Ramps, Floors, Deck, Stairs
12. ☐ Oil, Poison, Acid, Bites, Pests
13. ☐ Others _____

UNSAFE PRACTICES

1. ☐ No goggles or shield
2. ☐ Improperly fitted goggles
3. ☐ Dirty conditions in yard
4. ☐ Unsafe use of wrenches, Other tools
5. ☐ Defective, improper tools
6. ☐ Failure to keep eyes on chisel, etc., when striking with hammer
7. ☐ No gloves, Defective gloves
8. ☐ No safety shoes
9. ☐ Loose, improper clothing
10. ☐ Improper lifting, Gripping
11. ☐ Failure to observe surroundings
12. ☐ Contact with extreme temperatures, Hot, Cold
13. ☐ Unprotected openings
14. ☐ Improper placement of material
15. ☐ Welders masks, Air lines over working surfaces
16. ☐ Running, Pushing, Shoving
17. ☐ Improper use of ladders
18. ☐ Unsafe, Unsecured ladders
19. ☐ Working in awkward position
20. ☐ City, Group, Wet working surfaces
21. ☐ Walking surfaces obstructed by material, Hose
22. ☐ Unsafe stairways, Lack of steps
23. ☐ Lack of, Inadequate Ventilation
24. ☐ Lack of, Inadequate Illumination
25. ☐ Guards, Noise, Failure to use
26. ☐ Insecure, Defective stumps, clamps
27. ☐ No respirators
28. ☐ Others _____

REMARKS:



"Should We Use Plastics Here?"

In deciding upon the raw materials for the manufacture of war supplies or post-war products—the assistance of a competent research and testing laboratory may help you avoid costly mistakes.

Edwal chemists have the facilities to analyze materials for you and make tests to pre-determine performance. If desired, they also can set up control specifications in your plant so that the purity of raw materials or the quality of finished products may be checked routinely by your employees.

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For specific data on the experience of the Edwal staff, the various consulting and research services which they offer and the bases of charges, write today for a copy of booklet 21R.

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The National Soybean Processors Association
The Chicago Graphic Arts Association

Who is Right?

QUIZ QUESTION: What is Addressograph?



"Addressograph is a business system for writing payroll information. We have used it for several years."

"We use Addressograph in our factory office for speedily writing production forms. I think it's a production control system."



"I would define Addressograph as a system which puts information to be written more than once on metal plates so that it can be reproduced quickly and with 100% accuracy."

"I think Addressograph is equipment for addressing envelopes, magazines, and other mail."



"Addressograph is a method for writing job tickets, parts identification, etc. At least that's what we use it for in our plant."

Here is the Correct Answer:

Every one of these answers is right! As far as it goes. Actually, Addressograph simplified business methods save time, cut costs, and guarantee accuracy wherever paperwork is done. Addressograph fits itself into small business and large, into every department—takes over the complete job of writing anything which must be written more than once.

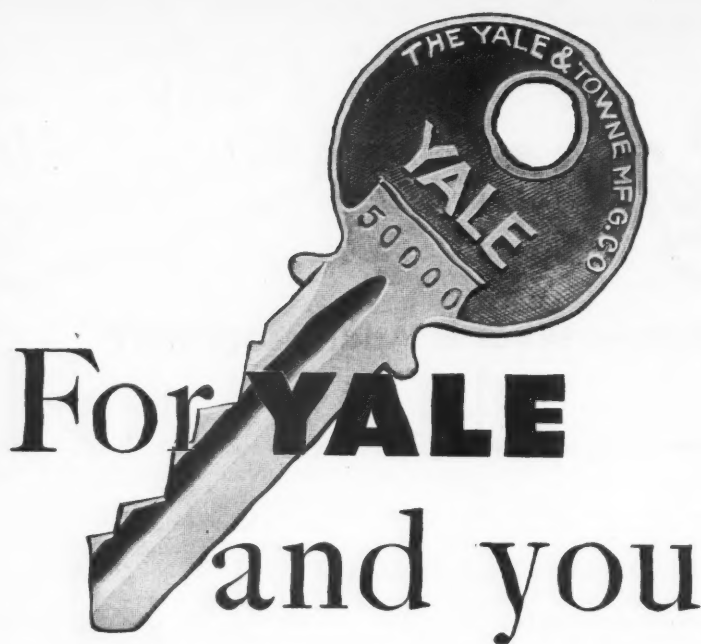
Why not start a treasure hunt in your business—search out ways to improve efficiency in office and factory? Our Research and Methods Department will help you, show you how Addressograph simplified business methods are cutting corners for others in your industry. Telephone our local agency or write Addressograph-Multigraph Corp., Cleveland 17, O.

Addressograph

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SIMPLIFIED BUSINESS METHODS

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For **YALE** and you

...SOME KEYS TO GOOD ADMINISTRATION



EFFECTIVE INVENTORY CONTROL



FREE-FLOWING PRODUCTION



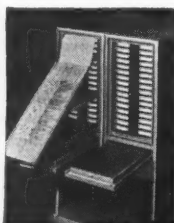
LOW-COST OPERATION

Most men will concur with Yale and Towne that record controls tested in war can be expected to play major roles in peace-time battles for sales volume.

Long-successful lock and hardware manufacturers with modern ways of doing things, Yale effectively governs vital plant activities with Kardex *Visible* and Graph-A-Matic Signal Control systems.

This company's raw materials stock control, for example, is assigned to a Kardex system providing quick reference to *four records in combination*, showing balances, summary of disbursements, record of allotments, and purchasing activity.

Graph-A-Matic signal control integral with these records provides an item-by-item chart of current status. Profit-eating overstocks are eliminated, also understocks that endanger the smooth flow of production. And Kardex is simple to operate, easy on the clerical payroll. All of which tends to reduce production costs.



KARDEX—of course!

Perhaps *your* organization could use these keys to good administration inbuilt in Kardex. Let a Systems and Methods Technician survey your requirements. Just call our nearest Branch Office.

SYSTEMS DIVISION
REMINGTON RAND
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Space is provided at the bottom of the slip for remarks.

Conventions by Television—Possibility that the conventions of tomorrow may be held via television, going a step further than today's conventions by mail, was voiced by J. R. Poppele, president of the Television Broadcasters Association, Inc., in addressing the annual convention of the National Retail Drygoods Association in New York.

Mr. Poppele pointed out that when sufficient coaxial cable and radio relay circuits as well as television transmitting and receiving equipment become available, an entire convention can be conducted in New York, for example, while members of the organization view the activities from large screen television equipment installed in public auditoriums in their home cities. Furthermore, via network relays, sessions of the convention might also take place in Chicago, Detroit, Atlantic City, or Los Angeles while members stay at home and see and hear all of the proceedings.

Railway Diner—Embodying the principle of diagonal seating to accelerate service and other innovations designed for beauty and utility, plans for a post-war dining car have been announced by the Pullman-Standard Car Manufacturing Company.

The seating plan is intended to eliminate interruptions caused by arrivals and departures at the tables and to enable waiters to step to the side when serving, keeping the aisle free at all times.

Tables are placed diagonally and seats set at a 45-degree angle to the side of the car instead of at right angles to it. Other features are vibrationless tables, spot-ray illuminations, linen storage at each table, intercar telephone communication, and tables free from water bottles and other service.

Business and the Schools—An immense amount of material published by business is valuable as supplementary teaching material and much finds its way into the schools. To bring together business organizations in producing material of real value and teachers in using it, "Commercial Supplementary Teaching Materials" discusses the use of commercial literature in the schools and indicates types of material most acceptable. This pamphlet, issued by the National Association of Secondary-School Principals, 1201

16th Street, N.W., Washington 6, D. C., is available without charge from the National Better Business Bureau, Inc., Chrysler Building, New York 17.

The principals' association through its Consumer Education Study, without charge to the users and producers of such materials, will advise as to the maturity level of pupils, courses of study, and so on. It will suggest educators competent to give constructive criticism and will offer appropriate techniques for experimental use of materials.

The Association also will transmit to business concerns through the National Better Business Bureau suggestions from teachers concerning supplementary teaching materials that they would like to have provided.

Safety Standards—Twenty-seven standards relating to the safety of workers were among the 157 standards approved by the American Standards Association during the past year. With few exceptions the need for all of the standards was closely related to the war effort.

In the wide range covered by the safety standards were shoes protecting workers from the dropping of heavy objects, from electric shock, and from hot metal; gloves to protect workers from sparks, molten metal, and from infra-red and ultra-violet rays; and women's work clothing.

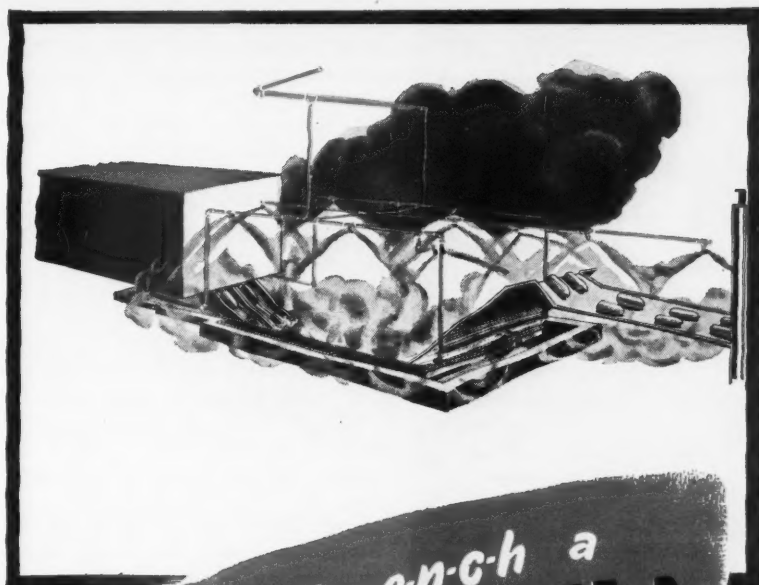
Approved also was a large group of standards relating to photographic and cinematographic equipment for use by the armed forces. The job of standardizing components of military radio equipment, undertaken at the request of WPB, likewise was completed and turned over to the war services.

GROSS PRODUCT

(Continued from page 14)

lic and private records, as in the case of net individual savings as estimated by the Securities and Exchange Commission. There are many variations. Each compiling agency may make its own rules. This is still one of the most difficult fields of measurement.

Each of these series has its special uses, and there is an extensive literature on all of them. For immediate detail, the reader is referred to two il-



How Q-u-e-n-c-h a
QUENCH TANK FIRE?



● Time was, and not so long ago, when a blazing oil quench tank was no easy thing to subdue—and the resulting loss in money, production hours and output was prodigious.

Then came FIRE-FOG and a new era of fire protection was ushered in.

This system of fire quenching is seemingly miraculous in its ability to deliver a quick, "knock-out" blow to flammable liquid fires. In only a few seconds of time a blazing tank is completely extinguished and the action is entirely automatic.

Here's how a FIRE-FOG

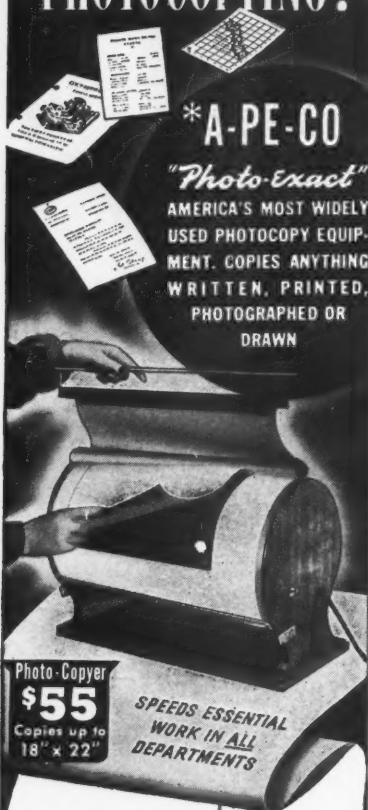
system works: FIRE-FOG nozzles are strategically placed to cover the fire hazard areas. No sooner does fire break out than a mist-fine spray of water attacks the burning area. Action is swift, sure and automatic. The flames are beaten down; an enveloping blanket of spray causes oxygen starvation and smothers the blaze; almost immediately the fire is extinguished.

Little wonder American industry has been quick to recognize the fire-fighting potency of FIRE-FOG—it blankets—it isolates—it quenches.

"Automatic" manufactures and installs a complete line of fire protection devices and systems for all types of fire hazards. Write for complete information—we'll furnish it cheerfully.

"Automatic"
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100 other records

illuminating articles by Charles Merwin in the August 1942 and November 1942 DUN'S REVIEW respectively. These are "National Income—What It Is; How It Is Measured," and "National Income, A Practical Yardstick."

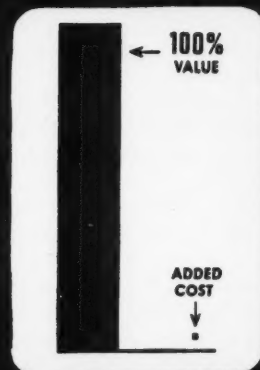
Internal Consistency

Mention has properly been made of the differences of opinion that have marked the growth of the various income concepts. In the next article they will be shown to have settled with particular intensity on the use of GNP projections to approximate the size of America's full employment goal in post-war years. These differences should never be emphasized, however, to the point of obscuring the simple order and consistency of the over-all structure. Essential relationships among all the series mentioned emerge plainly from Table II, which starts with the composition of GNP over the past four years and ends by reconciling the annual totals with National Income for those same years. From the reader's point of view it also brings into a common focus the illustrative balance of income and expenditures in Table I and the descriptions of the various series on page 14.

In Table II note the opening breakdown of GNP into its customary components (this time with supporting detail)—Government, business, and consumers. The second and third blocks are merely different breakdowns of National Income—one by types of income making up the total (National Income by Distributive Shares), the other showing what happened to the total (Disposition of National Income). (Where the items under "disposition" are not self-explanatory, the page 14 descriptions will help). Titles singled out in the descriptions for special attention again appear in Table II as "Income Payments to Individuals," "Disposable Income of Individuals," "Consumer Expenditures," and "Net Savings of Individuals." And finally the record return to GNP where it began, with a list of the structural differences between GNP and National Income.

The base is common. The result is actually a structure and not a jumble of random statistics. Despite the screeching effect engendered by debates over refinements, the parts really fit. It is true that there are other series in existence, such as those of the National Bureau of Economic Research and of the National Industrial Conference Board, the variations arising from dif-

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Moreover, since this is a loose leaf reporter, all facts and information are always up-to-the-minute. For new laws, amendments, court decisions, new interpretative bulletins, orders, rulings, regulations, forms, and related new developments are swiftly reported—as they "break"—loose leaf, ready for immediate use and insertion in place.

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ROWLAND CHUTE & CO. LTD. (B 693). Plastics, chemicals, glass

SATCO PTY. LTD., 40 Loop St. Manufacturers' Representatives. Branches

S. SLOVIN PTY. LTD. (Late SONVIL PTY. LTD.) (B 2396). Ladies'

J. SOLOMON & SON (B 675). Hardware, soft goods, roughs, machinery,

WM. SPILHAUS & CO. LTD. (B 113). Machinery, household appliances,

STUTTAFOED & CO. LTD., Adderley St. General merchandise.

STYLEWEAR DISTRIBUTORS PTY. LTD., 40 Loop St.

Branches S. A., Rhodesia. Ladies' frocks, coats, costumes,

underwear, children's wear, stockings, corsetry, gloves.

TRU PRODUCTS PTY. LTD. (B 1285). South Africa, South

West Africa, Rhodesia. High class ladies', men's hosiery,

gloves, corsetry, lingerie, cosmetics, rayon, cotton piece goods,

knit, sports, infants' wear, haberdashery. Buying office,

Herbst Bros., 92 Warren St., N. Y. Buy for own account; act

as Manufacturers' Reps.

UNITED AGENCIES (B 1568). All machinery and general requirements

for manufacture of bread, biscuits, crackers, pretzels.

DURBAN, S. A.

M. BEIT & CO. (B 2190). Also Johannesburg, Cape Town. Cosmetics, fancy goods, haberdashery, soft furnishings, textiles, hardware, electrical fittings, leather goods, toys, etc.

HAROLD J. DRINN (B 560). Domestic and commercial appliances,

switch gear and electrical motors. Cables, conduit and accessories.

HAVELOCK EMSLIE & CO. (B 2606). Textiles, cosmetics, canned food-

stuffs, hardware, crockery and motor accessories.

HAWKINS, E. C. & SONS (B 339). Bracket clocks, metal watch bands,

flapjacks, brush sets, imitation jewelry. Plastics, alarm clocks.

INDEPENDENT RETAILERS' ALLIANCE LTD. (B 321). Canned and

breakfast foods, household hardware.

A. D. KIMBER & CO. PTY. LTD. (B 2303). Tel. address: Kimberco.

Scales, weighing machines, electrical goods, lamps, paper, stationery,

kitchen, bathroom furniture, fittings, bookkeeping machines, bacon

slicers, bread cutters.

O. F. LURKE PTY. LTD., 15 Hooper Lane. Electrical supplies, heating

and cooking equipment.

A. S. MATHER (B 2499). Haberdashery, piece goods, builders'

and general hardware, canned foodstuffs.

E. WAYNMAN MCKEOWN (B 1436). Food products and general merchandise.

J. M. MOIR (B 849). Asphalt, electrical appliances, ignition and Diesel

fuel equipment.

E. S. MOWAT & SONS, 51 Milne St. Johan. and Pt. Eliz. Mechanical

and electrical machinery, industrials, bakery, machinery, equipment.

A. A. SAVAGE, 478 West St. Electrical domestic appliances. Motors and

wiring equipment.

STEWART & CO. (B 773). Dairy and ice cream plant. Kraft liner and

general.

JOHANNESBURG, S. A.

ASSOCIATED PROPRIETARY AGENCIES LTD. (B 4247). Indent and

distributing agents for toilet preparations.

AUTOMOBILE ELECTRIC SUPPLY LTD. (B 2964). Storage batteries,

automobile and aircraft accessories and replacement parts.

BARRY COLNE & CO. LTD. (B 4130). Machinery and engi-

neering supplies. Foundry equipment and supplies. Wood-

working machinery and accessories. Mill supplies.

HARRY L. BEILES PTY. LTD. HOLLANDIA HOUSE, President St.

Tooth brushes, hair brushes, imitation jewelry and novelties.

HERBERT E. BOWEN-FRIENDLY ADVERTISING PTY. LTD. (B 3102).

Exclusive sales South and Central Africa. Advertising specialties.

H. CANARD & CO. (B 8685). Also C. T. Reps. for S. A. Fancy goods,

toys, haberdashery, toilet sundries, jewelry, glassware.

CARST & WALKER PTY. LTD. (B 5500). C. T., Durban. Industrial chemicals, steel products, textiles, food.

COMMODITY AGENCIES. (B 1711). Produce, industrial raw materials,

timber.

B. P. DAVIS, LTD. (B 3371). Representing Bauer & Black,

Cheesebrough Manufacturing Co., American Chicle Co., etc.

Members Johannesburg C. of C., A. M. R. A.

DOMESTIC & FOREIGN TRADE PTY. LTD. (102 Mool St.) Foodstuffs,

groceries and delicacies.

DRUGS & TOILETS PTY. LTD. (B 2801). Patent and pro-

proprietary medicines, toilet, druggists' sundries; branches

throughout Union and Rhodesia. (Spot cash in N. Y.)

D. DRURY & CO. PTY. LTD. (B 3929). Machine tools, small

tools and engineering workshops equipment generally.

FILLERYS PTY. LTD. (B 6560). General sales agents, 14

branches covering South Africa, Southwest Africa, Rhodesia,

Belgian Congo, Portuguese East Africa.

FRANK & HIRSCH. (B 1803). Manufacturers' Reps. Cape

Town, Durban, Bulawayo, Port Elizabeth. C. of C., A. M. R. A.

Textiles, every description, hardware, kitchenware, fancy

goods, toys, building requisites, plastics.

FRENCH DISTRIBUTING CO. S. A. PTY. LTD. (B 6681).

General Sales Agents and Importers. Pharmaceuticals, industrial

chemicals, raw materials, toilet sundries, etc.

FURNITURE ENTERPRISES PTY. LTD., 156 Anderson St. Furnishing

fabrics and materials. Linoleum squares and other furnishing lines.

HARRIS & JONES PTY. LTD. (B 3297). Transvaal Agents L. C. Smith

and Corona typewriters. Interested in agencies for office machines,

equipment and supplies.

HILL & MURRAY PTY. LTD. (B 3070). Proprietary medicines, toilets

and cosmetics, grocery and household requisites. Ethical and professional

products.

E. HOLDMANN & VIDAL. (B 6111). Branches all principal

towns in the Union and Rhodesia. Cotton piece goods and all

other textiles, fancy goods, hardware, glassware, bazaar goods.

HOLLYWOOD DISTRIBUTORS PTY. LTD. (B 2597). Woolen, cotton

and rayon piece goods, hosiery and underwear.

HOLTUNG, VAN MAASDYK PTY. LTD. (B 6511). Shop and office equip-

ment, electrical goods. Industrial department associate offices Cape

Town and Durban.

HUBERT DAVIES & CO. (B 1386). Throughout Union, Rhod-

esia. Mechanical, electrical, civil engineering.

P. W. JENNINGS PTY. LTD. (B 3543). Also C. T. (B 198).

Want direct factory rep. Branded textiles, women's under-

wear, hosiery, sportswear; fabrics for domestic factories, i.e.,

neckwear, clothing, underwear, swimsuits; plastic household

utilities and fittings. Marketing branded lines, controlled distribution

our specialty. Members A. M. R. A.

B. OWEN JONES LTD. (B 2933). Chemicals: heavy industrial,

pharmaceutical, laboratory reagents; general laboratory supplies;

optical, scientific, control, medical and surgical instruments;

steel works and foundry supplies.

KEENE & CO. (B 2883). Also at Cape Town and Durban.

MANUFACTURERS' REPRESENTATIVES, all types of

merchandise. Will be pleased to receive inquiries from American

and Canadian manufacturers interested in export to South

Africa and desirous of Union-wide representation.

A. T. LAW & SON (B 5850). Hosiery, towels, ladies' footwear, men's and

women's underwear, glassware and kitchenware.

LENNON LIMITED (B 928). Wholesale manufacturing and retail

chemists and druggists. (Est. 1850).

LENSVELT & CO. PTY. LTD. (B 2651). Cape Town, Durban,

Port Elizabeth, East London, Kimberley, Bloemfontein, Pretoria,

Windhoek, Bulawayo and Salisbury. Indent, distrib-

uting agents; stockists; sales, marketing specialists proprietary,

pharmaceutical, chemist, grocery, stationery.

VIVIAN A. LEON (B 7136). Small tools, hardware, enamelware, kitchen-

ware, crockery, glassware, smokers' requisites, fountain pens and kind-

red lines.

R. MARCUARD PTY. LTD. (B 8858). Imports, exports Africa,

Middle East: raw materials, hardware, industrial chemicals,

steel, plastics, paper products, soft goods, foods.

K. R. MENTZ (B 6389). Men's wear, foodstuffs, rayon and cotton piece

goods, textiles, furnishing fabrics, etc.

NEWTON'S AGENCIES PTY. LTD. (B 4616). Clothing, all

kinds; textiles, headwear, domestic glassware, enamelware,

handbags, fancy goods, cosmetics, food products, industrial

chemicals, paper products.

H. POLLIACK & CO. LTD., INCORPORATING MACKAY

BROS. LTD., MACKAY BROS. & McMAHON LTD. Cape

CONTINUED IN FIRST COLUMN ON NEXT PAGE→

SOUTH AFRICA CALLING

(continued from preceding page)

JOHANNESBURG, S. A. (continued)

Town, Durban, Port Elizabeth, Pretoria; musical, electrical goods.

PROTEA DISTRIBUTORS PTY. LTD. (B 7793). Surgical, medical, hospital; pharmaceuticals, cosmetics, photographic supplies and equipment.

L. RAPHAELY & SON (B 476). Textiles, foodstuffs, etc.

RAYMONT & MARSHALL PTY. LTD. (B 7447). (Est. 1929). Cape Town, Durban; S. & N. Rhodesia, Belgian Congo. Textiles: cotton, rayon, silk; men's, ladies', juvenile underwear, outerwear, hosiery, household linens, furnishings, linoleums, oilcloths.

RAYMONT & BROWN PTY. LTD. (B 7524). Textiles, essences, split oak staves, chemicals, yarns and manufacturing supplies.

E. I. ROGOFF PTY. LTD. (B 7296). Timber, veneer, plywood, hardware, cotton, silk and woolen piece goods, upholstering materials, glassware, fancy goods, builders' and household hardware; adv. novelties.

C. F. SHAW LTD. (B 4372). Factory reps., import, export agents, leading British, American, Canadian manufacturers. Branches or reps. in every British or French Territory in Africa, India, Palestine, Middle East.

SILVERS MOTOR SUPPLIES PTY. LTD. (B 5988). Automobile parts, accessories, garage equipment, tools and machine tools.

SYDNEY SIPSER & CO. (B 6011). Ottawa House, President St. Cable: "Gownspiser." Indent agent, distributors ladies' frocks, coats, sports and underwear, showroom goods, etc.

SOUTH AFRICAN DRUGGISTS LTD. (B 5933). Wholesale chemists, manufacturing druggists, opticians, photographic dealers; fine, industrial, pharmaceutical chemicals.

L. SUZMAN LTD. (B 2188). Cigars, cigarettes, tobaccos, pipes, etc. **SUBSIDIARY COMPANIES.** Confectionery, foods, toilet, stationery, fancy goods. Nine branches.

TAYLOR & HORNE, 176 Jeppe St. Dental sundries and toilet requisites.

JOHN G. TRAIN & CO., 149 Commissioner St. Also Cape Town, Durban. Cotton and rayon textiles, yarns, hosiery, knitwear, fancy goods, foodstuffs, toys.

VERRINDER LTD., ASSOCIATED WITH S. HARTOGS PTY. LTD. (B 6666). Also Cape Town, Durban, Port Elizabeth, East London, Bloemfontein, Kimberley, Bulawayo, Salisbury and N'dola. Proprietary medicines, beauty preparations and toilet requisites (manufacturing facilities available), groceries and confectionery.

WESTDENE PRODUCTS PTY. LTD. (B 2279). Branches Cape Town, Durban, Bloemfontein, Port Elizabeth, Salisbury. 23 Essanby House, Jeppe St. Medical, surgical, hospital, toilet and fancy goods.

PORT ELIZABETH, S. A.

O. S. BLENKINSOP LTD. (B 839). Shoe factories and tanneries supplies, clothing factories requirements, automotive articles.

GILCHRIST'S ELECTRICAL STORES PTY. LTD., Main St. Electrical and radio equipment.

HALLIS & CO. (B 143). Art dealers and picture frame manufacturers. Also fancy goods, pottery and artware generally.

E. J. NARRAMORE, 100 Main St. Builders' and domestic hardware, tools, ironmongery, sporting goods.

NORTHERN RHODESIA

N'DOLA AGENCIES (B 128). N'dola. Hardware, enamelware, dresses, foundation goods, general merchandise.

SOUTHERN RHODESIA

AFRICAN COMMERCIAL CO. LTD. (B 1108). SALISBURY, N. Rhodesia, Nyasaland. Proprietary medicines, toilet and beauty preparations, groceries, confectionery, stationery, office equipment, textiles, etc.

ferences both in concept and in the treatment of component items. But most of the differences are not organic, and permit a return to the statement that there can properly be greater emphasis on harmony than on discord. The significance of even the few fundamental differences may be as growing pains rather than as deadlock. It is a serious and difficult business, this one of devising a measure of national activity capable of supporting soundly the many governmental and business policies that make use of it. There must be disagreements or nothing stout enough for the responsibility could be developed. The business executive may have noticed something of the sort in his own business.

In a somewhat private class, apropos of this sonnet on harmony, are some of the GNP projections to full post-war employment, still to be discussed. The projections are speculations about how prosperous we must be in some future year to be able to employ everybody, and raise fascinating questions about the place of Government in national economic management. These questions have too transparent a bearing on the next generation's "American way" ever to be completely peaceful. But as stated, that is a later story. . . .

Prestige of Income Series

Long before the outbreak of the war National Income had made a secure place for itself in economic and business reasoning. Economists in every part of the country, in most parts of the world for that matter, had learned to take the pulse of America through the sensitivity to business change of this index. Market analysts and sales managers used it or associated series to locate and gage the best prospects for their goods. Annual reports of mining corporations acknowledged indebtedness to the mother lode of National Income. The allure of investment circulars was often laid in a few velvety words of faith in the National Income. The press discussed gravely each annual release of the Department of Commerce, National Bureau of Economic Research, National Industrial Conference Board, Securities and Exchange Commission, or other responsible agencies, and discerned hopeful or disturbing features. A more democratic kind of proof was implicit in the swarm of good and bad causes that have sought to hitchhike on its prestige. References to it have run sonorously through both Congress-

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NEW MARKETS FOR NEW PRODUCTS

Manufacturers will need many new guides to their markets in the post-war days when old and tested products will compete against new metals, plastics, and synthetics.

Now is the time to start fact-finding through Dun & Bradstreet's nationwide service. We invite your inquiry.

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sional bills and business literature. It is one of America's major records.

But the war set hard new tasks. National Income proved not to have quite enough reach for the management of industry as distinct from analysis of the results of self-management. The national purpose had to be to get all useful production possible out of each segment of the economy, and thinking and planning had to be in terms of the distinctive potentialities of each. National Income shows not product data, but the payments made to labor and capital for producing products. The pressing need for war administrators was for as much information as possible on what was being made. WPB's actions were not concerned with economic bookkeeping on the net return to the people for their labor or capital, but with physical output.

The Army, Navy, Executive, and Legislative had to know how big a war production program industry could carry, how big an appropriation was necessary to finance it, how much space would be left for civilian goods of varying types, how threatening the inflationary gap that might emerge. However involved the final answers, they obviously had to start with somebody's guess about capacity. Army and Navy officers had during the years of peace been systematically collecting information to this end. But modern war makes an antique out of yesterday's science with disconcerting speed. Furthermore, the Army and Navy, having led a prince and pauper existence in this comfortably irrational land, began to ride on the plush. They could pick and choose practically at will, leaving to civilian officials in charge of the leftovers department the task of measuring over-all magnitudes. Statisticians were rushed to the new civilian front from the National Income cloisters, and the task of broadening and re-aligning old data was under way.

The classical example of both misuse and inadequacy of national income figures for war purposes is the subtraction of war expenditures from national income to arrive at the value of goods available to civilians. Gross national product jumped from \$97.1 billion in 1940 to \$186.5 billion in 1943, or \$89.4 billion. National income on the other hand increased merely from \$77.6 billion to \$147.9 billion or only \$70.3 billion. Proportionally, it happens, they advanced at nearly the same rate, but the difference in absolute spreads was



Bruce Barton, noted author and Metropolitan Policyholder.

A policyholder reports on his life insurance company

THIS YEAR, in making its Annual Report to 31,000,000 policyholders, Metropolitan decided to try something new.

We asked Bruce Barton, a policyholder, and a well known writer, if he would write the report. He agreed.

So he visited our Home Office, asked a host of questions, looked into the facts and figures. According to his report, the things he learned about the Company confirm what the Examiners of the State Insurance Department found. Following their most recent official examination of the Company they had stated:

"From this examination, it becomes evident that the Company is in strong

financial condition, that its affairs are ably managed, and that the business of the Company is being operated in the interests of its policyholders."

One out of every five persons in this country is a Metropolitan policyholder. If, like Mr. Barton, you are one of this group, you'll be more than interested in the things he learned. Even if you're not a policyholder, you cannot help but enjoy reading Mr. Barton's account of what Metropolitan did in 1944 for the benefit of policyholders and public.

If you'd like a copy of this Annual Report to Policyholders, entitled, "Something New in Annual Reports," write in for it. It's yours for the asking.

BUSINESS REPORT FOR 1944

In accordance with the Annual Statement as of December 31, 1944, filed with the New York State Insurance Department.

OBLIGATIONS TO POLICYHOLDERS, BENEFICIARIES, AND OTHERS

Policy Reserves Required by Law \$5,923,550,602.75

This amount, together with future premiums and interest, is required to assure payment of all future policy benefits.

Policy Proceeds and Dividends Held at Interest. 296,078,543.16
These are funds left with the company to be paid in the future.

Reserved for Dividends to Policyholders 114,154,637.00
Set aside for payment in 1945 to those policyholders eligible to receive them.

Other Policy Obligations 67,579,917.19
Claims in process of settlement, estimated claims not yet reported, premiums paid in advance, etc.

Taxes Due or Accrued 21,656,953.00
Includes estimated amount of taxes payable in 1945 on the business of 1944.

Special Reserve for Investments. 104,368,000.00
To provide against possible loss or fluctuation in their value.

Miscellaneous Liabilities 24,644,127.31

TOTAL OBLIGATIONS \$6,552,032,780.41

ASSETS WHICH ASSURE FULFILLMENT OF OBLIGATIONS

National Government Securities \$3,066,445,698.96
United States and Canadian.

Other Bonds 1,919,930,288.87
Provincial, State and Municipal \$ 98,069,228.70
Railroad 588,210,136.87
Public Utilities 769,116,680.34
Industrial and Miscellaneous 464,534,242.96

Stocks 104,596,021.13
All but \$2,407,086.53 are Preferred or Guaranteed.

First Mortgage Loans on Real Estate 916,419,648.68

Farms 87,325,964.20
Other Property 829,093,684.48

Loans on Policies. 370,567,520.95
Made to policyholders on the security of their policies.

Real Estate Owned 310,793,056.22
Includes \$49,148,672.32 real estate under contract of sale and \$146,808,180.56 Housing Projects and real estate for Company use.

Cash 143,063,675.82

Other Assets 163,634,660.80
Premiums due and deferred, interest and rents due and accrued, etc.

TOTAL ASSETS TO MEET OBLIGATIONS \$6,995,450,571.43

Thus, Assets exceed Obligations by **\$443,417,791.02**. This safety fund is divided into

Special Surplus Funds \$15,706,000.00

Unassigned Funds (Surplus) \$427,657,791.02

These funds, representing about 7% of the obligations, serve as a cushion against possible unfavorable experience due to war or other conditions and give extra assurance that all policy benefits will be paid in full as they fall due.

NOTE:—Assets carried at \$332,059,336.58 in the above statement are deposited with various public officials under requirements of law or regulatory authority. Canadian business embraced in this statement is reported on basis of par of exchange.

HIGHLIGHTS OF 1944 OPERATIONS

Life Insurance in Force, End of 1944 \$30,696,750,125

Paid-for Life Insurance Issued During 1944 \$2,064,042,459

Amount Paid to Policyholders During 1944 \$592,034,726.22

Metropolitan Life Insurance Company

(A MUTUAL COMPANY)

Frederick H. Ecker, CHAIRMAN OF THE BOARD

Leroy A. Lincoln, PRESIDENT

1 MADISON AVENUE, NEW YORK 10, N. Y.



TO COMPANY PRESIDENTS:-----



Today—thanks largely to you and other industrial executives—22,000,000 civilian workers are speeding victory and achieving postwar security through the Payroll Savings Plan. Over 60% of the 6th War Loan subscriptions came from this source—and, between drives, this forward-looking plan has been responsible for 3 out of 4 War Bond sales!

Good as this record is, the Payroll Savings Plan can be still more effective. Believing this can best be accomplished by giving Bond buyers a definite idea of the many benefits accruing to them, the War Finance Division has prepared a variety of active aids for employee education.

This new “ammunition” includes:

- a—An entertaining, swift-paced moving picture, graphically showing the importance of buying—and holding—War Bonds.
- b—An interesting, easy-to-read booklet, explaining how War Bonds may be accumulated to provide education for children, homes, retirement incomes, etc.
- c—Attractive, handy War Bond envelopes, enabling Bond holders to note each separate purchase—and the specific purpose for which each Bond or group of Bonds was bought.

Passing this particular ammunition requires that you reappraise your own company's Payroll Savings Plan. Have your own War Bond Chairman contact the local War Finance Committee—today! They will welcome the chance to discuss this new program with you.



The Treasury Department acknowledges with appreciation the publication of this message by Dun's Review

SPEED UP YOUR PAYROLL SAVINGS PLAN

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considerable. The importance of the difference can be illustrated by the fact that in 1943 war expenditures were \$81.3 billion (market value). The subtraction of this figure from the national income total of \$147.9 billion would apparently limit civilian consumption to \$66.6 billion, whereas when separately computed consumer expenditures for goods and services in that year actually reached a record total of \$91 billion.⁸ Obviously the residual could mean little as the comparison was between gross and net values.


If our war administrators had used the figures blindly they would have had to order an entirely unnecessary degree of curtailment in civilian production. Or conversely that might more easily have overlooked the full expanse of certain types of civilian output from which facilities and labor could be usefully diverted to the war effort. "War Outlays" are at market prices and therefore must include business taxes and depreciation, because it is only from total receipts that the latter can be paid or charged. National income is net of taxes and depreciation, and deliberately so, for the reason that what was sought was an approximation of how much earnings people had cleared for themselves out of their year's work, after impersonal costs such as business taxes and depreciation had been washed out.

A Side Glance at Peace

Post-war considerations also had their place. Mention has already been made of the use of GNP-Full Employment projections by the Department of Commerce and the Committee on Economic Development as an aid to comprehensive business planning. Also, in Gross National Product total Government expenditures became a distinct category, rescued from their anonymity in National Income. A glance at Table I will show no trace of them among the income items. Their effects are there, but diffused and nameless. Not so under GNP. There all elements of Government spending are assembled under one banner, poised, mobile, ready and able to compensate for any serious default in consumer or business spending. In the same mood it is contended that the total GNP must be kept reasonably high and stable, and here happen to be three old musketeers—consumers, business, and Government—who are natural coordinates for the job. So

⁸ All figures from April 1944 Survey of Current Business, United States Department of Commerce. For further development of the war-time relationship of the two concepts see "War Expenditures and National Production" by Milton Gilbert, in the March 1942 Survey of Current Business, Department of Commerce.

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runs, implicitly, the invitation and promise of the nation's latest accounting set-up. It is not the suggestion of aggressive Government action that is new. We had that before the war and would have it in time of trouble under any kind of accounting. The contribution is in the introduction of more order, both into business analyses of the relation of individual industries and products to the country's full employment goal, and into arguments on the abstract wisdom and distinctive purposes of Government spending.

Method of Measuring GNP

The construction and uses of gross national product figures were carefully described in two articles by Milton Gilbert and George Jaszi in the February and March 1944 numbers of DUN'S REVIEW. The remarks below are offered mainly because of the need for a barroom impression. In lieu of floor portraits, however, the only art needed for this piece has been borrowed from Milton Gilbert, Chief of the National Income Unit of the Department of Commerce, as Table I.

The totals in both columns are of Gross National Product for 1944. Gaze at the right-hand column labeled expenditures. This is the sum total of the money spent by consumers, business, and Government for goods and services during 1944, after eliminating duplications resulting from inter-industry purchases. This purchase or sales total can be taken as equivalent to national production for the reason that there are inventory and international balancing items included as a component of capital formation (the middle item made up principally of business expenditures for plant and equipment, and residential construction). The emphasis is obviously on market values at the point of final sale, with the exception of government services for which there is no trading market and which therefore are entered at cost such as salaries, wages, interest, and purchases from private business. In the discussion of statistical disagreements which will follow in the next number of DUN'S REVIEW this problem of evaluating government services will be given a small amount of additional attention, but our only interest now is in general reasoning.

The differences of opinion will also include a challenge as to the legitimacy of GNP as a proper measure of national production. The market value of the goods and services we produce in a year is a concept in its own right.

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Civilian Population	34,579,000	26.33
Income payments to Individuals	\$26,885,000,000	35.28
Retail Sales (1939)	\$13,144,000,000	31.26
Consumption of electric energy, kilowatt-hours	46,038,000,000	31.51

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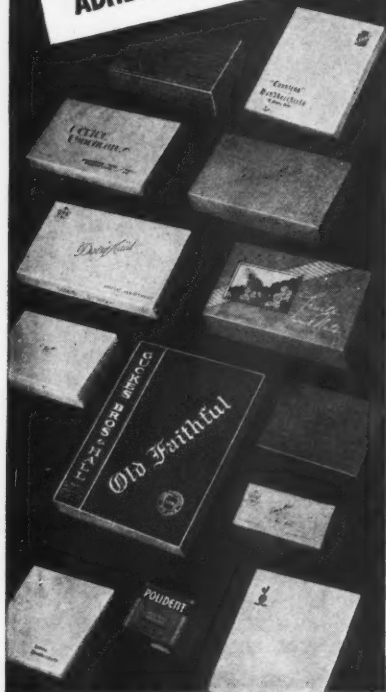
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It is not National Income, nor Income Payments, nor Disposable Income; it is itself. It is permissible to throw in the pig's squeal as well as the pig, if a useful catalytic effect can be shown. The validity of all figures depends upon their objectives, and the difficulty of relating selections tightly to purposes is a common cause of misuse.

The GNP total, after extremely difficult adjustments for price changes from year to year, can be compared with similar totals for other years. Thus is the basis laid for examining capacities in the light of past experience. Due to the fact that so far as possible the totals are aggregated from the final sales of categories of products, there could be a corresponding breakdown in the comparison of possible capacities.

War Created Need for GNP

National income was not intended to do this kind of a job. Its essence was more nearly concerned with the welfare of the people who made and consumed all these things, and of the net benefits that accrued to them in the process. This purpose is plainly revealed in the left-hand column headed income. There we see wages and salaries, the incomes of proprietors, interest, rents, and undistributed profits. The total is National Income. All that is left to do is to add depreciation and depletion charges and business taxes, the more or less invisible costs of creating national income, to convert the net total to gross at which point it will balance expenditures as in the table. There are differences of opinion about the effect of adding these depreciation charges and business taxes, but (1) the result is nearly equivalent to the final sales at market prices which constitute GNP, and (2) in this article we are concerned more with the structure, intentions, and physical relationships of the several concepts than with settling debates on all open questions.

The old function—that of National Income or the *net* returns to capital and labor—was not the less valuable because of the urgency of new needs. It remained the base of the statisticians' mysterious formulae, and the skill of decades was a national resource that it instantly made available. For that matter, the *concept* of gross national product was no war discovery. Dr. Kuznets and the National Bureau of Economic Research had brought forth a series (of somewhat different construction) to fill this gap in our statistical armory long before the war, but



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under the lash of necessity the Department of Commerce had to speed its enlargement and perfection for heavy duty.

There are also ways of reasoning that National Income data can be refined and re-arranged to yield results of a character paralleling those now being sought through the GNP concept and its post-war projections. Indeed as a net public benefit concept, it might conceivably be made over into an outline of specific social goals for industry and government. Any such achievement, however, would be a new chapter in the history of the older concept. It is by no means being ignored, however, and a place may still have to be reserved for it in one of America's more distant designs for economic management.

Summary of War Purposes

It is possible therefore to think of at least two important war purposes as underlying the shift from the national income to a gross national product basis of measurement in 1942:

1. To develop a better measure of capacities for war and peace goods, which could not be done through the use of national income data because the data are on earnings and not on products.

2. To permit more accurate judgments of the capacities that would be left for civilian goods after war needs were satisfied and thus plan anti-inflationary programs more intelligently.

The war had to begin with statistics, and to one close enough the sound effects were as of a statistical chant—Washington's way of going to war with a song on its lips. A medley of announcements from high places about production miracles on tap; in the background a muted swish of flying pencils as statisticians tried to figure out what could actually be done. By and large they did arrive at a potential, and with admitted variations it is somewhere embodied in the current news from Paris and Manila.

But for the purposes of this analysis the emphasis must shift to peace. Thought of the future could never have been far out of the minds of men working continuously on the records of the past. The following peace-time purposes of GNP must also have been considered:

1. To provide a full employment framework within which the potentials for individual commodities and services could be visualized in clearer perspective and detail.



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2. Within that same framework to examine the potential scope and need for major categories of private spending, as consumer outlay and capital investment, and facilitate industry's search for adequate new patterns of production and consumption.

3. To segregate government expenditures as an independent variable in our national income account, and so foreshadow their use as standard equipment in post-war efforts to keep the national economy in balance at a satisfactory level.

A following article will deal with the technical and logical controversies that have arisen in connection with efforts to calculate the level of gross national product that will be necessary to support full employment after the war. The questions being publicly raised about these projections are important not merely because of the general hazards of looking ahead, but because any spread between the GNP level finally regarded as essential to prosperity and the level actually thought to be attainable through normal business efforts in any given year is likely to be taken as the measure of government's responsibility. Obviously, one of the results of such reasoning is to provide a useful new setting for old issues.

Post-War Employment Level

Debates that are ordinarily restricted to professional audiences therefore are being properly thrown open to the business public. No closing impression should be left, however, that a settling of the statistical issues will enable business to breath easily again. Whether the size of GNP capable of supporting full employment is fixed at a high or low level it will be much larger than anything heretofore known in times of peace. The growth in population alone will create larger needs, the amount of unemployment persisting even into 1940 will not always be tolerated, and past peace-time increases in productive efficiency will no doubt be resumed at some rate in the future.

With our larger post-war population, a mere return to 1940 would obviously mean a major depression. All these factors combine to set high goals for industry, agriculture, the professions, and labor. The effort to attain them does not have to be convulsive on every count. The needs of a larger population should automatically call forth higher production as they always have in the past. Higher productivity per worker should also in part provide its own compensations in lower costs, in-

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Mr. Fox directs activities in business administration, public relations, personnel, reports, research and special studies. He has a B. S. degree from Western Michigan College and an M. A. degree from the University of Michigan. He was formerly a member of the public schools administrative staff of Kalamazoo, Michigan, and was on the faculty of Kalamazoo College and of the University of Michigan.

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creased demand, and more diversified living. It may not be absolutely necessary to decide now how big a GNP we must have for some distant year. The knowledge that business must certainly plan for some expansion is in itself provocative. No matter what the public is finally going to decide about Government's responsibilities, this administration or any other is going to have a program.

For today's purposes we may actually need only a crude approximation of the magnitude of the goal at which we must aim. In the meantime, however, analysts in and out of government will continue to insist on greater precision, and there will always be diverse opinions on the wisdom of declaring a formal division of responsibility among consumers, business, and Government. The reasons for differing estimates therefore are still of lively interest. The reader may find that the roots of some of them are in the backyard of his personal experience, and can look forward to enjoying explosive views of his own.

DUN'S REVIEW

290 BROADWAY NEW YORK 8, N. Y.

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SUBSCRIPTION: \$4 a year; \$10 for three years; 35 cents a copy. Outside the United States, \$5 a year. DUN'S REVIEW goes to the chief executive of each company using the services of DUN & BRADSTREET, Inc. Service subscribers may obtain additional subscriptions to the magazine for executives, branches, and so on, at special rates.

THE CONTENTS of this magazine are indexed in the Industrial Arts Index and also annually in an index available upon request to the publishers. . . . Member C.C.A. . . . Volume 53, No. 2203.

MORE DETAILED breakdowns of those data originally compiled by the publishers appear monthly in DUN'S STATISTICAL REVIEW, largely in tabular and chart form, \$1 a year, \$2 outside of the United States. These data include business failures, bank clearings, building permits, price indexes, and regional trade information; they are summarized and interpreted each month in DUN'S REVIEW (see page 19, 20, 21, 22).

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